Working Together To Improve Water Quality In Alabama

Alabama Nonpoint Source Management Program 2005 Annual Report

ADEM

Alabama Department of Environmental Management

Copies of this report are also available on the ADEM Website at: www.adem.state.al.us

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Alabama Dept.of Environmental Management
Education and Outreach
Nonpoint Source Unit
PO Box 301463
Montgomery, AL 36130-1463

Phone: 334-394-4360
FAX: 334-279-3051

Nonpoint Source Program Staff:
Scott Hughes, Chief-Education/Outreach

Norman Blakey, Chief-NPS Unit

Patti Hurley, Alabama-Tombigbee, Coastal, Black Warrior Basins

Mike Jones, Coosa Basin

Missy Middlebrooks, Tallapoosa, Chattahoochee-Chipola Basins

Dee Northcutt, Tennessee Basin

Mark Sport, Choctawhatchee-Pea-Yellow, Conecuh-Sepulga Basins

Carmen Yelle, Tennessee, Cahaba Basins

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Contents

The Alabama Nonpoint Source Program

Overview

MISSION

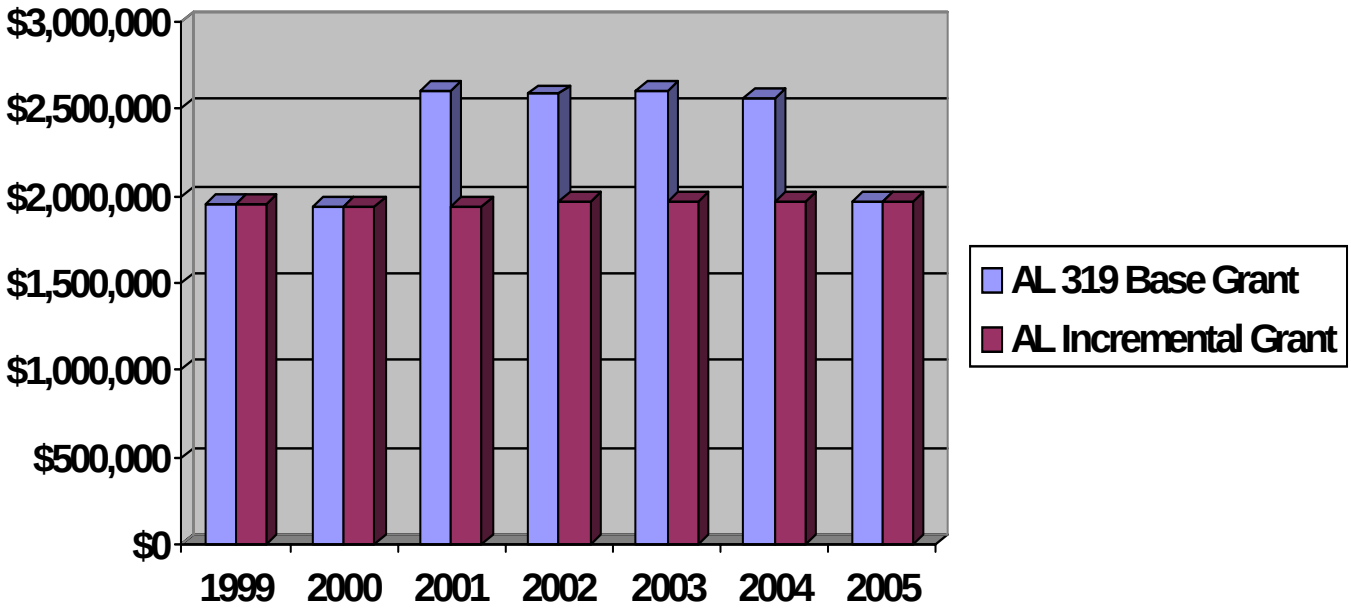
To effectively and efficiently implement a comprehensive nonpoint source pollution management program designed to achieve, maintain, and/or protect beneficial uses of surfaces and ground waters using a flexible, targeted, and iterative river basin approach supported by broadly inclusive local stakeholder partnerships.

Nonpoint source pollution (NPS), also known as polluted runoff, is the largest cause of water quality impairments in Alabama, as well as across the country. It accounts for approximately two-thirds of the water quality impairments in our streams and lakes. Unlike point source pollution that enters waters from definable locations such as discharge pipes, nonpoint source pollution originates from many and varied sources. Nonpoint source pollution is usually associated with farming, logging, mining, urban areas, construction activities, land disposal, onsite septic systems, and wastewater disposal activities. Atmospheric deposition can also contribute to nonpoint source pollution.

Our day-to-day activities such as driving vehicles that leak fluids, improperly applying lawn care products, dumping waste petroleum products down stormdrains, or improperly treating residential wastewater can contribute to nonpoint source pollution. Generally, as rainfall runoff moves over and through the soil, it may pick up and carry NPS pollutants such as pesticides, fertilizers, nutrients, metals, sediment, and pathogens and deposit them in rivers, lakes, groundwater aquifers, wetlands, and coastal areas. These pollutants may then threaten human health, or be toxic to livestock, wildlife, and aquatic organisms.

Section 319(h) of the Clean Water Act authorizes federal grant funding to implement EPA-approved state nonpoint source management programs. Since 1990, the Alabama Department of Environmental Management has used Section 319 grant funding to target a wide range of NPS problems. State agencies, local governments, universities, nonprofit entities, and others are eligible to apply for Section 319 grant funding through the Alabama Department of Environmental Management. Grant funds may be used to implement best management practices, and also provide technical assistance, education and outreach, and local stakeholder capacity to restore, manage, or protect water quality. Projects that address the development and implementation of watershed management plans are a special priority.

Comparison of Section 319(h) Base Funding & Incremental Funding Received by Alabama in Fiscal Years 1999 - 2005



Alabama's Total Maximum Daily Load (TMDL) Program Update

In fiscal year 2005, TMDL development continued at a rapid pace throughout the entire state. The bulk of the work in FY05 consisted of drafting nutrient TMDLs for the Cahaba River Basin and finalizing TMDLs that were drafted in the previous years. Nutrient TMDLs for 4 segments of the Cahaba River were drafted and public noticed in October of 2004. The public notice period was extended until January 24, 2005.

Finalizing TMDLs was the primary focus of Alabama's TMDL Program for FY2005. Specific activities associated with finalizing the TMDLs included addressing public comments received during the public notice periods and revising TMDLs, when necessary, based on the comments received. Other activities included collecting additional data and information to fill data gaps identified during development of the Draft TMDLs. ADEM staff also worked diligently reviewing and revising TMDLs developed by EPA, such as the TMDLs developed for waters in the Hurricane Creek watershed, Weiss Lake, and Shades Creek. Once finalized, TMDLs developed by ADEM were subsequently submitted to EPA Region 4 for final review and approval. A total of 32 TMDLs were approved in FY05 for various waterbody and pollutant combinations in the Black Warrior, Cahaba, Coosa, Escatawpa, Mobile, Perdido-Escambia, Tallapoosa and Tennessee River Basins. Of the 32 approved TMDLs, 21 were developed by ADEM and 11 were developed by EPA Region 4. That brings the total number of approved TMDLs for Alabama to 128.

The following tables identify primarily NPS impaired streams that have been removed from the 2000 or 2002 303(d) lists. A waterbody is considered "partially restored" if: (a) a water is impaired by more than one use, but is restored for one or more (but not all) of those uses, and (b) a water has a use that is impaired by more than one pollutant, but meets the criteria for one or more (but not all) of those pollutants. A waterbody is considered "fully restored" if all uses for the water are being met.

Primarily NPS Impaired Waters that are Fully Restored*

#	Waterbody Name	River Basin	County	Causes	Sources
1	Short Creek	Black Warrior	Jefferson	Metals	Subsurface mining-abandoned
2	Caney Branch	Mobile	Baldwin	Pathogens (Fecal Coliform)	Pasture grazing - riparian
3	Piney Creek	Tennessee	Limestone	OE/DO Pesticides Siltation	Nonirrigated crop prod., Pasture grazing
4	Dry Creek	Tennessee	Jackson	pH, Metals, Siltation	Surface mining-abandoned, Mine tailings-abandoned
5	Hogue Creek	Tennessee	Jackson	pH, OE/DO, Nutrients	Surface Mining - abandoned
6	Rocky Branch	Tennessee	Jackson	pH, siltation	Surface mining-abandoned
7	Coon/Flat Rock Creek	Tennessee	Jackson	pH, Metals, Siltation	Surface mining-abandoned
8	Town Creek	Tennessee	Lawrence	OE/DO	Nonirrigated crop prod., Pasture grazing
9	Black Warrior River (Bankhead Lake)	Black Warrior	Jefferson	OE/DO	Dam construc.
10	Town Creek	Tennessee	Lawrence	OE/DO	Nonirrigated crop prod., Pasture grazing
11	Broglen River	Black Warrior	Cullman	Pathogens	Urban runoff, Pasture Grazing

**Pending EPA approval of Alabama's 2004 303(d) list.*

#	Waterbody Name	River Basin	County	Causes	Sources
1	Camp Branch	Black Warrior	Jefferson	Metals	Surface mining-abandoned
2	Shades Creek	Cahaba	Jefferson	OE/DO	Collection system failure, Hwy/road/bridge construc., Land development, Urban runoff/Storm sewers, Removal of riparian veg., Bank/shoreline modification
3	Conecuh River	Perdido-Escambia	Covington	OE/DO	Nonirrigated crop prod., Flow reg/mod, Pasture grazing
4	Conecuh River	Perdido-Escambia	Covington	Pathogens	Nonirrigated crop prod., Flow reg/mod, Pasture grazing
5	Wolf Creek	Tallapoosa	Randolph	Ammonia, OE/DO	Int. animal feeding oper.
6	Second Creek	Tennessee	Lauderdale	OE/DO	Pasture Grazing
7	Warren Smith Creek	Tennessee	Jackson	pH	Surface mining-abandoned
8	Camp Branch	Black Warrior	Jefferson	Metals.	Surface mining-abandoned
9	Bayview Lake	Black Warrior	Jefferson	Organic Enrichment, Ammonia, and Pesticides	Municipal, Urban runoff/Storm sewers, Industrial, Spills, Surface mining-abandoned
10	Shades Creek	Cahaba	Jefferson	Organic Enrichment	Collection system failure, Hwy/road/bridge construc., Land development, Urban runoff/Storm sewers, Removal of riparian veg., Bank/shoreline modification
11	Conecuh River	Perdido-Escambia	Covington	Organic Enrichment and Pathogens	Nonirrigated crop prod., Flow reg/mod, Pasture grazing
12	Dry Creek	Tennessee	Jackson	Siltation	Surface mining-abandoned
13	Rocky Branch	Tennessee	Jackson	Siltation	Surface mining-abandoned
14	Coon/Flat Rock Creek	Tennessee	Jackson	Siltation	Surface mining-abandoned, Mine Tailings-abandoned
15	Alabama River (Claiborne Lake)	Alabama	Wilcox	Nutrients	Dam construc., Flow reg/mod
16	Alabama River (Claiborne Lake)	Alabama	Wilcox	Nutrients	Dam construc., Flow reg/mod
17	Alabama River (Claiborne Lake)	Alabama	Wilcox	Nutrients	Industrial, Nonirrigated Crop prod., Pasture Grazing
18	Brindley Creek	Black Warrior	Cullman	OE/DO	Urban runoff/Storm sewers
19	Brindley Creek (lower segment)	Black Warrior	Cullman	Pathogens	Urban runoff/Storm sewers
20	Lake Mitchell	Coosa	Coosa	OE/DO	Urban runoff/Storm sewers, Flow reg/mod
21	Brier Fork	Tennessee	Madison	Unknown Toxicity	Nonirrigated crop prod., Land development
22	Elk River	Tennessee	Limestone	OE/DO	Pasture grazing, Nonirrigated crop prod.
23	Huntsville Spring Branch	Tennessee	Madison	Metals	Urban runoff/Storm sewers
24	Pond Creek	Tennessee	Colbert	Metals	Urban runoff/Storm sewers, Nonirrigated crop prod., natural sources
TOTAL PRIMARILY NPS IMPAIRED WATERS PARTIALLY RESTORED 24					

Primarily NPS Impaired Waters that are Partially Restored*

#	Waterbody Name	River Basin	County	Causes	Sources
1	Camp Branch	Black Warrior	Jefferson	Metals	Surface mining-abandoned
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15	Alabama River (Claiborne Lake)	Alabama	Wilcox	Nutrients	Dam construc., Flow reg/mod
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TOTAL PRIMARILY NPS IMPAIRED WATERS PARTIALLY RESTORED: 22					

**Pending EPA approval of Alabama's 2004 303(d) list.*

ADEM Nonpoint Source Inspection/Enforcement Activities

ADEM is responsible for permitting and compliance activities relative to NPDES permit coverage for treated wastewater and stormwater discharges from surface and underground mining operations (coal and noncoal mineral/ore mining such as sand, gravel, clay, stone, etc.), regulated construction activity, coalbed methane gas exploration/development/production, and concentrated animal feeding operations (CAFOs).

Federal and state regulations regarding discharges of stormwater require operators/owners to apply for and obtain NPDES permit coverage prior to conducting regulated construction disturbance and/or initial operation of small noncoal, nonmetallic mining sites, and associated land disturbance activities. These rules require that a Construction Best Management Practices Plan (CBMPP), prepared by a qualified credentialed professional (QCP), that is designed to minimize pollutant discharges in stormwater runoff to the maximum extent practicable during land disturbance activities, be fully implemented and effectively maintained. A CBMPP is required to be submitted with the request for registration for proposed discharges to a Tier 1 waterbody(s), proposed discharges to an Outstanding National Resource Water (ONRW) designated waterbody, and for projects involving waterbody relocation or significant alteration. NPDES registration coverage must be retained until all disturbed areas have been reclaimed and/or effective stormwater quality remediation has been achieved.

The rules require an operator/owner to register construction activities and associated areas one (1) acre or greater in size. Construction activities less than 1 acre in size that are part of or associated with a larger plan of development or sale that might eventually exceed one acre, must register. In addition, construction activities less than 1 acre in size that are determined by ADEM to have significant potential to cause or contribute to water quality impairment, may be required to register.

In fiscal year 2005, Department staff performed approximately 3,200 inspections on construction and noncoal mining of sites less than five acres.

USDA-NRCS Nonpoint Source Efforts in Alabama

The Section 319 Program and the Natural Resources Conservation Service (NRCS) have enjoyed a long history of water quality and environmental protection, cooperation, and collaboration. This partnership is integral to the Alabama Nonpoint Source Management Program efforts to address nonpoint source pollution. NRCS assists landowners in identifying and controlling nonpoint sources of pollution from agricultural lands and incorporates a water quality protection perspective into all conservation and nutrient management plans. The NRCS continues to reach out to "under-served" communities through partnerships and provides leadership to ensure that all programs and services are made accessible and are fairly and equitably managed.

The NRCS continues to work closely with the Alabama Department of Environmental Management, the Alabama Cooperative Extension System, the Alabama Department of Agriculture and Industries, the Alabama Department of Public Health, the Alabama Soil and Water Conservation Committee, and the College of Agriculture-Auburn University, to develop and provide technical assistance for the implementation of the AFO/CAFO requirements for the state. In order to meet the requirements, assistance is given to farmers for developing conservation plans for activities such as composting, proper disposal of animal mortality, rotational grazing, solids separation, waste storage ponds, waste water irrigation, and diversions.

***Watershed Partnerships*:**
The NRCS provides BMP implementation leadership for activities supported in part by Section 319 funds for mainstem and tributary water quality protection activities. Two examples include the Flint Creek Watershed Project and the Cotaco Creek Watershed Project in Morgan County. These watersheds use a "watershed management approach" to address impairments and watershed protection coordinators are in-place to identify and implement on-the-ground projects. ADEM listed these watersheds on the Clean Water Act Section 303(d) list as impaired, Flint Creek in 1993 and Cotaco Creek in 1998. Since then, the NRCS, Morgan Soil and Water Conservation District, ADEM, and others have been diligently working to restore both watersheds to the Fish and Wildlife Use Classification. There have been visible signs of improvement in Flint Creek - particularly as related to a prevalent duckweed problem. Duckweed can be a strong indicator of excessive nutrients reaching the creek from human waste, animal manure, fertilizers, or other nonpoint sources.

Water quality is expected to improve, although measurable improvements may be years away. Current EPA/ADEM Section 319 efforts include an award of $301,480 to assist landowners in establishing vegetated buffer zones along 5.4 miles of Mack Creek and 6.3 miles of Robinson Creek. Other water quality protection enhancements include livestock fencing and stream crossings, alternative livestock watering areas, and dry storage facilities for poultry litter. A benefit of the buffers is the exclusion of cattle from entering streams and polluting them with fecal matter or damaging the banks which causes bank erosion and stream sedimentation.

In addition, the Crowdabout Creek and the Herrin Creek Watersheds, both tributaries to Flint Creek, are targeted for EPA/ADEM Section 319 funding. A Crowdabout Creek Watershed Project was awarded $342,000, and a Herrin Creek Watershed Project was awarded $63,424 to protect water quality. Funding is primarily used as incentive payments to landowners/users to protect stream banks from erosion. It is expected that protection efforts on seven miles of Crowdabout Creek will stop 534 tons of silt, and buffers on one mile of Herrin Creek will prevent 87 tons of silt, from impairing these tributaries to Flint Creek.

The Cotaco Clean and Green Program was awarded EPA/ADEM Section 319 nonpoint source funding of $300,000 and $217,166, for two projects to address water quality impairments associated with poultry litter in Cotaco Creek, and $227,265 for a project to address erosion along five miles of the West Fork Creek tributary in the Cotaco Creek Watershed. Sign-up for the Conservation Reserve Program (CRP) incentives began in April 2005.

USDA-NRCS programs that address Nonpoint Source water quality Concerns in Alabama include the :

- Conservation Reserve Program (CRP) includes funding for such practices as establishment of introduced grasses and legumes, native grasses, wildlife habitat with woody vegetation, and tree planting; installment of diversions, erosion control structures, grassed waterways, shallow water areas for wildlife, vegetative cover, filter strips, wetland trees, contour grass strips, and riparian buffers; wetland restoration; and rare and declining habitat. A highlight for FY05 CRP funding involved Mr. Thornton Stanley's cattle operation in the Wheeler Lake Watershed in Morgan County. The acreage had been neglected for years , but with assistance from NRCS; erosion, nutrient, and bacteria loading concerns were addressed in his five-year conservation plan to reduce NPS pollution for a 303(d) listed segment of Cotaco Creek that flows through the 380-acre farm. The farm consisted of cattle in huge pastures with open access to streams and little wildlife habitat. Today, the pastures have been renovated and an intensive grazing system is used. Heavy use areas are protected, cattle are fenced out of the stream, multiple stream crossings have been installed, and riparian forest buffers have been planted to improve water quality and provide wildlife habitat. WHIP funds were also used to create a shallow water waterfowl area from runoff captured from crop land. Because of these practices, runoff that ultimately flows into Cotaco Creek is much improved. This property is used as a Cotaco Creek Watershed Project demonstration site.

- The Conservation Security Program (CSP) helps landowners and users to implement and maintain needed conservation practices. The CSP program targets large scale watersheds that contain impaired waters listed by ADEM on the Section 303(d) list. In FY05, only producers in the Wheeler Watershed (HUC 06030002) in the Tennessee Valley were eligible to participate. Encompassing 8-counties in north Alabama and 4-counties in south central Tennessee, the Wheeler Watershed was among 202 watersheds across the nation eligible to participate in the 2005 CSP program. The watershed experiences significant impacts related to erosion and nutrients in runoff from agricultural lands. Based on a benchmark inventory and a follow-up interview, NRCS determined in which program tier watershed applicants participated. The estimated number of farms is 5,581 with an estimated acres of 794,369 (minus CRP). The Wheeler Lake CSP program awarded 64 contracts amounting to $910,540 over 10 years.

- The Wetland Reserve Program (WRP) is a voluntary program that provides technical and financial assistance to address several natural resource restoration and protection issues. The NRCS provides technical support and landowners receive financial incentives to restore, protect, and enhance wetlands in exchange for retiring marginal land from agriculture. In FY05, three tracts (approximately 460 acres) were applied in Marshall, Jackson, and Dekalb Counties. The FY05 allocation was $411,200, with an anticipated allocation of $80,807 for FY06 .

- The Environmental Quality Incentives Program (EQIP) provides much support for Section 303(d) listed impaired waters and TMDL implementation efforts. Conservation Technical Assistance is provided to landowners who plan and apply conservation practices to control erosion and to properly manage soil, water, air, plant, animal resources, and cultural resources. Alabama uses a five-tier approach for funding EQIP. Total allocation for FY05 was $14,632,274 (as of Sept. 29, 2005). Funding was allocated to the 67 counties ($11,987,986); Limited Resource Farmers/Small Farms ($1,240,704); Poultry Litter Redistribution ($512,742); Invasive Species ($668,258); and Ground and Surface Water Protection ($222,585). For FY06 (beginning Oct. 1, 2005) statewide projects will target Invasive Species Control ($0.5M); Poultry Litter Redistribution ($0.5 M); Limited Resource Farmer funding ($1 M), and Water Conservation ($0.25 M). County allocations are expected to be $9,409,000. These local efforts will target erosion control/soil quality, grazing lands, water conservation, water quality/animal waste management, forest health, and wildlife protection.

- The Grassland Reserve Program (GRP) provides critical ecological benefits and plays a key role in environmental quality. The $964,000 of GRP funding helps to protect water quality by keeping historical native grasslands - as native grasslands. It prevents grasslands from being converted to croplands, forestlands, or being converted to urban development. The program had 56 applications for the Black Belt Soils (MLRA 135). At least 44 applications were received from other areas of the state. It is unknown if this program will be funded in FY06 since it requires a "line-item" budget appropriation.

- The Farm and Ranch Protection Program (FRPP) protects farmland from urban sprawl. It was funded at $604,084 in FY05, and is expected to increase to $1,415,036 in FY06. The program has 5 easements (622 acres), with 6 easements pending (1,670 acres). The NRCS partners with the Alabama Department of Agriculture and Industries (ADAI) to implement this program. In FY06, the NRCS will send ADAI $650,000 to propose properties for inclusion in the program.

- The Emergency Watershed Protection (EWP) assists watershed stakeholders in relieving hazards to life and property from floods and the products of erosion created by natural disasters that cause a sudden impairment of a watershed. These funds provide disaster assistance to projects resulting from damages caused by recent natural disasters. Nearly $3 million in EWP funds were provided to Alabama to aid in disaster assistance to locally-sponsored watershed protection projects part of the hurricane relief package signed by President Bush in 2004.

Soil Survey Status in Alabama:

Soil survey reports are available for most counties in Alabama. As of March 2005, at least 39 counties have published surveys, 5 have mapping completed, 4 have surveys in progress, 14 have published soil surveys, 2 have updates in progress, and 3 counties have completed mapping and publication plans. The maps are SSURGO (Soil Survey Geographic) certified, meeting all standards and specifications as described in the NRCS National Soil Survey Handbook, and are available in digital format. The Alabama Legislature shares the cost of the soil survey program by providing funds through the Alabama Soil and Water Conservation Committee. In a few counties, local units of government and private industry share the costs. A soil survey map is available at: ftp-fc.sc.egov.usda.gov/MO15/web/News/alstatus.pdf

Poultry Litter Transfer Program and Partnership:

Section 319 funding was used to initiate the Alabama Litter Distribution Project in Alabama in partnership with ADEM, the Tennessee Valley RC&D, SWCC and Districts, NRCS, ACES, and others. The program is now an approved EQIP cost-share program. The project provides an incentive to distribute litter to areas of the state that has historically not used litter in order to reduce litter application in areas where it has traditionally been over-applied. In addition, it promotes a long-term market for litter as fertilizer around the state to maintain better distribution of the nutrients. Applications are taken on a continuous sign-up basis. In FY05, $512,742 of EQIP was directed to this program.

Agency Cooperators

As the lead state agency of the Alabama Nonpoint Source Management Program, the Alabama Department of Environmental Management works with many cooperators across the state along with adjoining state and local agencies. The Department has established a unique partnership with each of the following agencies/organizations to implement projects and enhance water quality in Alabama.

Federal Agencies

- USDA - Natural Resources Conservation Service
- U.S. Fish and Wildlife Service
- Weeks Bay National Estuarine Research Reserve
- USDA-Farm Service Agency
- Tennessee Valley Authority
- U.S. Space and Rocket Center
- U.S. Geological Survey

State Agencies

- Alabama Soil and Water Conservation Committee
- Auburn University Department of Fisheries & Allied Aquacultures
- Alabama Cooperative Extension System
- AU Marine Education and Research Center
- Alabama Agricultural Experiment Station
- Choctawhatchee, Pea and Yellow Rivers Watershed Management Authority
- Geological Survey of Alabama
- Alabama Department of Education
- Mississippi State University Cooperative Extension System
- University of West Alabama
- University of Alabama
- Shelton State Community College
- Auburn University Montgomery
- Alabama Department of Agriculture and Industries
- University of North Alabama
- Alabama A&M University

Local Agencies/Organizations

- StormCenter Communications
- Alabama Water Watch Association
- Birmingham Storm Water Management Authority
- Alabama Clean Water Partnership
- Alabama Pulp and Paper Council
- Montgomery Water Works and Sanitary Sewer Board
- Shelby County Commission
- CAWACO RC&D
- Alabama Power Foundation
- Dee Rivers Ranch
- Tri-River Water Watch
- Tombigbee RC&D
- Save Our Saugahatchee
- Shelby County Commission
- Morgan County Commission
- Sand Mountain-Lake Guntersville Watershed Conservancy District
- Alabama Chapter Soil and Water Conservation Society
- Soil and Water Conservation Districts (counties of Franklin, DeKalb, & Morgan)
- Soil and Water Conservation Districts (counties of Baldwin, Mobile, & Covington)
- Madison County Soil & Water Conservation District
- Alabama Association of Conservation Districts
- Tri Rivers Waterway Development Association
- Flint River Conservation Association
- Alabama Mountains, Rivers, and Valleys RC&D
- Madison County Watershed Advisory Committee
- Barbour County Soil and Water Conservation District
- Bullock County Soil and Water Conservation District
- Soil and Water Conservation Districts (counties of Coffee, Covington, Crenshaw, Dale, Geneva, Henry, Houston, & Pike)
- Coosa Valley RC&D
- Lake Watch of Lake Martin
- Lake Wedowee Property Owners Association
- Soil and Water Conservation Districts (counties of Chambers, Clay, Cleburne, Coosa, Elmore, Lee, Macon, Montgomery, Randoph, Tallapoosa, and Talledega)
- Lauderdale County SWCD
- Cullman County SWCD
- Blount Soil and Water Conservation District
- Winston County Soil and Water Conservation District
- Cullman County Poultry and Egg Association
- Cullman County Cattlemen's Association
- Cullman County Commission
- Marshall County Commission
- Sand Mountain Research and Extension Center
- Sand Mountain Lake Guntersville Watershed Conservancy District
- Soil and Water Conservation Districts (counties of Marshall, Jackson, and Etowah)
- Pickens County School System
- Madison County Department of Public Health
- Madison County Cooperative Extension System

Stakeholder Efforts

The Alabama Clean Water Partnership

The Alabama Clean Water Partnership (ACWP) is based on the watershed approach, working across political boundaries and linking point and nonpoint source interests together to safeguard water quality. Clean Water Partnership Basin Facilitators, in conjunction with individual basin sponsors, are in place across the state, coordinating activities in ten major watersheds, including the Coosa, Tallapoosa, Cahaba, Alabama-Tombigbee, Chattahoochee-Chipola, Choctawhatchee-Pea-Yellow, Conecuh-Sepulga, Tennessee, Black Warrior, and Coastal basins. A statewide, nonprofit, 501(c)(3) organization, the Alabama Clean Water Partnership has also been established to promote the effort and identify funding for water quality projects across the state. A steering committee, comprised of stakeholders representing basin-wide interests, is in place within each major river basin to facilitate communication and the exchange of information, and to provide vision for the protection and restoration of Alabama's rivers.

Alabama Clean Water Partnership Facilitators

Working for the ACWP Board of Directors, Allison Jenkins serves as the Statewide ACWP Coordinator, facilitating daily Board business, administering associated projects and grants, transferring information between basins, and assisting ACWP Basin Facilitators across the state. The Statewide Coordinator works closely with facilitators regarding ways to increase participation in, and the effectiveness of, the basin steering committees. During this process presentations have been made regarding the successful structure of basin steering committees and additional services the ACWP might provide in these basins

To date, donations totaling $56,025 have been made to the ACWP for specified projects in the ten basins across the state. The ACWP fundraising video, completed in 2004, has been distributed to basins for their use in fundraising efforts. Currently, the following special project funds are being administered:

- Lower Tallapoosa – Renew Our Rivers - $600
- Middle Tallapoosa – Data Viewer and other project not yet specified - $12,939.77
- Chattahoochee-Chipola or Middle Tallapoosa – Project not yet specified - $5,000
- Catoma Creek, Upper Alabama – Public Education - $333.65
- Chattahoochee-Chipola – Facilitator Expenses/Project not yet specified - $6,513.44
- Choctawhatchee-Pea-Yellow – "What's in *YOUR* Water?" curriculum - $75
- Lay Lake – Project not yet specified - $5,000
- Alabama-Tombigbee – Stakeholder involvement - $5,000
- $2,500 from Alfa Insurance

The ACWP is involved in many projects and activities. One major effort that the ACWP is heavily involved in is the education and recruitment of additional stakeholders and partners to assist in ongoing and future projects. The Statewide Coordinator continued to make and organize several presentations, displays, and workshops across the state in 2005. ACWP basin brochures, "Nerdy Man" flyers, "What's in YOUR Water?" Teacher Curriculum, and other pertinent information were also distributed upon request.

Alabama & Tombigbee Clean Water Partnership

Alabama & Tombigbee Basin Management Plans have been completed and are currently being distributed to stakeholders. Data is shared between stakeholders during Steering Committee Meetings and Subbasin Meetings. The committee continues to review and collect additional sources of data as part of the Basin Management Plan process. The AL-Tom CWP is also working closely with the Mississippi Department of Environmental Quality to share data for the Buttahatchee River Watershed geomorphological study in the Upper Tombigbee River basin.

Implementation of the Catoma Creek TMDL by the Catoma Watershed Advisory Group, the Montgomery Water Works and Sanitary Sewer Board and the NRCS is underway and is funded by a 319 grant. Resolution of the three Alabama River TMDLs has been achieved with changes to the wastewater treatment scheme being made to a paper mill.

The Ala-Tom CWP and other stakeholders in the area are undertaking education projects aimed at small businesses in the Upper Alabama subbasin. Two projects (the City of Prattville Business Partners for Clean Water and the City of Montgomery Business Partners for Clean Water) are being developed to provide education for small businesses. The Ala-Tom Clean Water Partnership has also promoted educational activities which include public service announcements at local theaters and billboard/bus ads through the City of Montgomery Stormwater Division.

A grant application has been made to the Laura Jane Musser Fund to allow additional facilitator time to assist in education of stakeholders around the divisive issue of streambank failure and property loss on the Tombigbee River. This process will also enable a strong partnership to be developed in the Tombigbee area.

The stakeholders are being educated on projects that have been successful in other parts of the state and education projects are being planned and implemented. Additionally, groups such as the Urban Forestry Ecosystem Ad Hoc Committee for the Tri-County Area are being assisted in their efforts. As a result of a NEMO presentation by the facilitator to the Montgomery City Council, a new landscape ordinance, which promotes tree canopy and limits pervious pavement, was passed. Through promotion of the Urban Forestry Ecosystem Ad Hoc Committee, the Montgomery Tree Committee and the City of Montgomery Planning Department (Urban Forester), the Ala-Tom CWP has encouraged a new landscape ordinance that increases tree canopy and decreases pervious pavement on developed property. The City of Montgomery City Council recently passed the ordinance unanimously.

Cahaba River Clean Water Partnership

Cahaba River Basin CWP meetings are held bimonthly and discussions have centered around pending and existing TMDLs, TMDL development, and implementation of the current *Cahaba River Basin Watershed Management Plan*, and how to implement a monitoring program for the Upper Watershed. This committee is also providing support for workshops to be held regarding Low Impact Development.

A stakeholder database has been compiled using sign-in sheets from the Cahaba River Basin CWP, and Upper Cahaba Watershed study meetings, including technical, advisory, and sub committees, Consortium, partnership meetings, public meetings, web queries and other environmental meetings taking place in this watershed. The database, used to disseminate information to stakeholders, is maintained on the Regional Planning Commission of Greater Birmingham's server.

Working with subcommittees through the Upper Cahaba Study and the Clean Water Partnership, committees have formed to address a Future Monitoring Plan, Model Evaluation, Historical Data, and Data Collection Approvals and Standards. Reports are in draft form and will be used in writing the subwatershed plans.

The facilitator is working to coordinate activities and partners so there is environmental gain without reproduction of efforts. The combination committee, referred to as the Samplers Group holding Sampler's Summits, is a working group comprised of all known monitors in the Upper Cahaba. This work is now heading in the direction of mapping the monitoring efforts so that information can be captured in real time, allowing for sampling to occur without duplicity and error. The Samplers have also expressed the desire to have yearly summits to engage in further discussion with their peers on research efforts. Additionally, the facilitator has been scanning historical documents for preservation and to further research efforts in the basin.

Over the last year, the facilitator for the Cahaba River Basin Clean Water Partnership has been involved in programs and meetings that address water quality issues and bring stakeholders back into the partnership. These include: Cawaco board meetings, Brownfield Regional Redevelopment Task Force, Jefferson County Groundwater Festival, Ross Bridge ASLA Student Landscape Competition for Greenway Master Plan, Birmingham Urban Garden Society, Keep Birmingham Beautiful, People Interested in Phytoremediation – demonstration garden at Sloss Furnaces, Center Point design charette, NEMO training, Earth Day at the Gardens, Cahaba River Conservation Education Canoe Float, Cahaba River Clean-up, Solar Sun Workshop, Alternative Waste Water Treatment tour, Jefferson County Forestry and Wildlife Committee.

The committee is also working towards reinstating the septic grant for the Lower Cahaba Basin. The septic grant funding will be available for working with the lower basin stakeholders to provide educational workshops, demonstrations, and vouchers.

Black Warrior River Clean Water Partnership

Activities facilitated or involving the Black Warrior Clean Water Partnership include:

- The Black Warrior CWP aided the Five Mile Creek Greenway Partnership in coordinating stream cleanups, Alabama Water Watch trainings, presentations, and developing four issues of a Five Mile Partnership newsletter.
- A summer intern from the Office of Surface Mining Summer Intern Program was secured to conduct a feasibility study of the use of Nitron portable X-ray Fluorescence analyzer (XRF) in determining metals in sediment. Sediment samples will be gathered in the Five Mile Creek Watershed in support of a proposed greenway plan.
- A Renew Our Rivers Clean Up of Holt Lake (August 20) and Renew Our Rivers/National Public Lands Day Clean Up of Bankhead Lake (September 24)
- A field trip for the Lower Sub-basin to tour the University of West Alabama – Alabama Onsite Wastewater Training Center on May 15
- An ACWP Presentation at the Alabama Forestry Association PLM Logger Training in Carrollton, AL, July 22.
- Assisting the Regional Planning Commission of Greater Birmingham in the development of the *Alternative Wastewater Seminar* held in Cordova on July 14.
- A CWA, 303(d) list, and TMDL development presentation to the Black Warrior Riverkeeper organization on August 8.
- Assisted the Tuscaloosa County SWCD in hosting an Alabama Water Watch Training July 26-27. Taylor Steele of the McWane Center-Globe program trained 9 citizens in AWW protocols.
- Facilitated the funding (319(h) $2,000 and Cawaco RC&D $3,000) of the GLOBE Program (McWane Center) to support schools in the Black Warrior River Watershed.
- Assisted with planning and participated in the 2004 Jefferson County Groundwater Festival, October 25-26, 2004.
- Facilitated coordination of the Alabama Clean Water Partnership's initiative *What's In Your Water* training, hosted by the McWane Center, November 19, 2004.
- Bridget Shealy, intern for the Black Warrior Clean Water Partnership is currently working on the following projects:
  - A FEMA buyout area in the Tarrant Enviroplex will showcase new and innovative treatments for stormwater management (i.e. bioswales, permeable pavement, green roofs.) Vulcan Materials has agreed to develop and engineer the site design. The Enviroplex will become the headquarters for the Five Mile Creek Greenway Partnership.
  - Huffman High School Greenhouse Upgrade - The greenhouse will be used to propagate and wholesale plants for wetlands and rain gardens. The school has storm water drainage issues that will be solved through the installation of a storm water wetland. This wetland will also be used as an outdoor classroom.
  - Green Roof Resource Packet and presentation - This information will be used at the December 14th workshop on Green Roofs sponsored by Cawaco Resource Conservation & Development Council, Inc.
- Upper sub-basin field trip (January 19th) to E.A.R.T.H. Park and a potential urban stream restoration site in the City of Cullman.
- Submitted USDA/NRCS Conservation Partnership Initiative Grant to identify cost-effective methods for improvement of the Locust Fork Watershed.
- A 319 project proposal was developed and submitted to ADEM to improve conditions on Black Branch, a 303(d) listed stream
- Participated in the Brownfield Regional Assessment Team in identification of brownfield sites within the Black Warrior Watershed.
- A visit to Lakeview Community, Tuscaloosa County, at the request of the City of Lakeview and the Lakeview Homeowners Association, to discuss water quality issues within their municipality. A referral was made to the Tuscaloosa SWCD.
- Working with Blount County ADEM, USDA/NRCS – Soil & Water Conservation District to develop a subwatershed management plan for the Dry Creek Watershed.
- Working with ADEM, ADIR-Abandoned Mine Lands Division and Office of Surface Mining to develop a subwatershed management plan for the Black Branch Watershed. (Mulberry Fork Watershed.)
- Developed a potential list of NEMO workshops that could be used to develop a coordinated NEMO program for 2006-2007. This list was provided to Toby Bennington, Regional Planning Commission of Greater Birmingham.

Chattahoochee-Chipola Clean Water Partnership

The first "re-organizational" steering committee meeting of the Chattahoochee-Chipola River Basin CWP was held February 22, 2005 in Eufaula. The group discussed previous and future basin activities, focusing on accomplishments of the previous facilitator and identifying efforts that need to be completed. Two additional meetings have been held since February. Discussions included efforts

to continue improving the diversity and quality of the stakeholder lists, input into the development of basin management plans for the Chattahoochee and Chipola River basins, and how the group can facilitate the process in conjunction with basin activities. Efforts are also underway to maximize attendance at public meetings associated with the basin management plans to begin in early 2006.

On August 22nd the ACWP statewide coordinator, the chairman and facilitator of the Chattahoochee and Chipola basins, and Kleinschmidt met with the Mid-Chattahoochee Group (representation from the three states) to brief the group on the role of the CWP and its potential contributions to the basin-wide efforts to protect water quality. This group plans to hire a facilitator in the Georgia portion of the Chattahoochee in order to coordinate similar efforts on the Georgia side.

Three projects are in the early stages of execution. A preliminary meeting was held on July 15th in Opelika to discuss with a local developer and city officials various alternatives that could be implemented in neighborhoods under construction to better manage stormwater runoff/water quality. On July 16th landscaping students and city officials met to see firsthand the areas located in Eufaula that could utilize rain gardens. Efforts are ongoing to implement a community and an education outreach program for middle school students in a variety of communities. The Steering Committee has approved the use of funds for these projects and other funding sources are also being pursued.

The ACWP currently holds donations made to the Chattahoochee-Chipola River Basin CWP in the amount of $6,513.44, with another $5000 donation having recently been received from the Westpoint Stevens Foundation to be used in either the Chattahoochee or Lower Tallapoosa basins. Project ideas are currently being solicited by the ACWP with final project selection by the ACWP Board of Directors.

Choctawhatchee-Pea-Yellow Clean Water Partnership

The Choctawhatchee-Pea-Yellow Rivers CWP continues to work toward the completion of their Basin Management Plan. Water quality, biological, geological, and other geographically related natural resources information for the basin has been compiled, interpreted, and put in GIS format by the Geological Survey of Alabama. Data from various sources such as ADEM, GSA, NRCS, CPYRWMA and Troy University has been compiled. Presentations concerning the Plan have been made to all the counties in the watershed.

Additional activities of the Choctawhatchee CWP include:

- A Choctawhatchee Stream Clean Up was held on May 14, 2005.
- The facilitator is working with RC&D Council to develop a project to map all dirt road stream crossings in the watershed using GPS coordinates
- Currently working on the Watershed Management Plan to recommend projects for the basin
- The facilitator coordinated the Crenshaw County Groundwater Festival and is serving on the Covington County Groundwater Festival Committee (new festival).
- Submitted application to RC& D for funding to create a “large” Watershed Model to be placed in various locations in the watershed.

Conecuh-Sepulga Clean Water Partnership

In 2005, the Conecuh-Sepulga CWP continued to work on updating Steering Committee membership with requests sent to those with numerous absences and seeking replacements for vacancies. The facilitator has been assisting in coordinating Alabama Water Watch Trainings , displays, cleanups, presentations, and Covington County and Crenshaw County Groundwater Festivals. She has also met with Poarch Creek Indian officials in Atmore to provide information on the CWP. The tribe plans to provide a representative to the steering committee and participate with CWP efforts. The Conecuh-Sepulga CWP is involved in the Covington County Dirt Road Committee—involving concerned landowners, NRCS, county commission, GSA, RC&D, etc. -- to brainstorm ways to inventory and control sedimentation problems with unpaved roads across the county. They are also continuing to work across state lines with Florida in assisting Pensacola Bay Watershed with plans for a 2 state tour in October of the watershed. The Conecuh-Sepulga Basin Plan was completed September 30, 2004 and continues to be distributed.

Coastal Basins Clean Water Partnership

The Coastal Alabama Clean Water Partnership continued to meet quarterly. Some of the activities of the Coastal Alabama Clean Water facilitator and/or partnership include:

- Financial sponsorship of the Dog River Watershed Alabama Water Watch publication.

- ❖ Juniper Creek Restoration Project Field Day was held to showcase innovative BMPs. A poster was presented on the Juniper Creek Pollution Prevention Project at the Coastal Zone '05 Conference.
- ❖ Provided water monitoring kits for Alabama Water Watch trainings and recertification workshops.
- ❖ Facilitated the Little Lagoon Watershed Project Steering Committee meetings and working to complete the Little Lagoon Watershed Management Plan.
- ❖ Presented the Bon Secour Watershed Management Plan to the Bon Secour Protective Association.
- ❖ Presented CACWP restoration efforts at the Mississippi-Alabama habitat restoration workshop.
- ❖ CACWP display at several events, such as the Environmental Studies Center Open House and the Bay Area Earth Day Festival.
- ❖ Presentation on "Introduction to Smart Growth" at the Weeks Bay Nonpoint Source Workshop.
- ❖ Participation in the Coastal NEMO Team.
- ❖ Attended the Pascagoula River Basin steering committee meetings.
- ❖ Attended Smart Coast Watershed subcommittee meetings.
- ❖ Through a contract with ADEM's Coastal Nonpoint Program, conducted "Vegetated Treatment Systems in Coastal Alabama" workshop for engineers.
- ❖ Attended Coastal Nonpoint Source Program MATRIX meeting.
- ❖ Participated in the Coastal Wastewater Task Force.
- ❖ Participated in joint Mississippi / Alabama smart growth meeting to discuss potential for future joint projects.
- ❖ Attended Mississippi-Alabama habitat restoration workshop. Presented CACWP restoration efforts.
- ❖ Developed and distributed follow-up surveys to stream restoration and stormwater BMP workshop attendees to help in future workshop planning.
- ❖ Distributed annual CACWP requests for proposals. No proposals were submitted for consideration.
- ❖ Participated in Smart Growth planning with the Town of Dauphin Island.

The Coosa River Basin Clean Water Partnership

The Coosa River Basin Facilitator has assisted the steering committees in setting policies, providing leadership, overseeing the planning and implementation of the organizational structure for the Coosa River Clean Water Partnership Program, and offering guidance to the Coosa River Basin Watershed Advisory Committee. Coosa River Basin Steering Committee accomplishments include:

- ♦ Development of a Lower Coosa River Basin circular that will be distributed in newspapers and health departments
- ♦ Completed the 4th Annual Etowah County Water Festival with 1,400 students in attendance and over 100 volunteers
- ♦ Selection of a campaign slogan called "Clearly Coosa" for the Coosa River Basin Campaign
- ♦ Assisted the Coosa River Basin Watershed Advisory Committee in coordinating community-based watershed restoration
- ♦ Assisted with the implementation of the organizational structure for the Coosa River Clean Water Partnership Program
- ♦ Planned a failing septic system workshop for the Lower Coosa sub-basin.

The Coosa River Basin Facilitator continues to assist the steering committees in setting policies, providing leadership, overseeing the planning and implementation of the organizational structure for the Coosa River Clean Water Partnership Program, and offer guidance to the Coosa River Basin Watershed Advisory Committee. Stakeholder and public outreach meetings were conducted concerning watershed water quality needs, with priority focused on Alabama's Section 303(d) list, including identification of stakeholders within the basin.

Tallapoosa Basin Clean Water Partnership

In 2005, the Tallapoosa CWP continued to meet quarterly. One of the successes of this basin is the completion of the Saugahatchee Creek Watershed Management Plan. An implementation proposal is now being written for funding of a project within the Saugahatchee Watershed. In addition, the Middle Tallapoosa CWP is currently seeking their own coordinator for their section. The Middle Tallapoosa CWP has also recently completed their first stream restoration project in Alexander City.

Tennessee River Basin Clean Water Partnership

The Tennessee Basin Clean Water Partnership conducts and participates in ongoing activities throughout the basin advocating water quality issues. Such activities included:

- Participation in water festivals in Lauderdale, Colbert, Limestone, Morgan, and Madison Counties.
- Provision of a traveling billboard as a public outreach effort, moving from place to place on a regular basis to increase citizen education opportunity.
- Clean Vessel Act education at boat shows and TVA boating events.
- NPS education at the Home Builders Show in Huntsville and a presentation to the Limestone County Homebuilders Association.
- Conducted stakeholder/public outreach concerning watershed water quality needs through bimonthly meetings of local watershed groups, SWCD meetings, and other types of meetings and workshops, including:
    - Sand Mountain Lake Guntersville Watershed
    - Paint Rock Watershed
    - Flint River
    - Cypress Creek
    - Meeting with Arab City
    - Meeting with TARCOG
    - Meeting with Hanceville City 7/8/05
    - Nature Conservancy Meeting 7/26/05
    - Meeting with Goose Pond 8/3/05
    - Poultry Task Force Meeting 8/23/05
    - Logging Presentation 8/24/05
    - Shoals Smart Growth Public Forum II
- To date the Huntsville Utilities, UAH and NASA are participating in supplying the data for the data viewer set up by CH2M Hill
- Indian Creek/Huntsville Spring Branch watershed - Alabama Water Watch Water Chemistry Monitoring Workshops are being conducted
- Working with Goose Pond to set up their water quality testing project.
- Development of a PowerPoint presentation linking the CWP Partnership and RC&D interest in water quality issues.
- Provide brochures of the Tennessee Basin, Wetland Operations and Maintenance, and septic system homeowner guide and record keeping folders
- Presentation to the Alabama Logging Council

The facilitator is also working with:

- Madison County on Phase II
- The City of Athens on Phase II
- Providing information for Morgan County and the City of Decatur on Phase II
- Working with TARCOG on their water quality project in DeKalb County providing the education as requested.
- Morgan County – streambank restoration hydroseeding project to protect water quality
- Presentation to Limestone County on Phase II
- Sand Mountain Lake Guntersville to secure funding within the Guntersville Reservoir: Several proposals have been submitted and others are being prepared.
- Goose Pond Colony to secure funding for septic systems through ADECA and TVA recreational funds and to finalize a Clean Vessel Grant for the marina
- A proposal submitted to Cargill Citizenship Committee on June 29 (Improving water quality specifically relative to the land application of poultry litter)
- Received a $250 grant from Legacy for the program “Protect our Environment”.
- *Receiving a $10,000 grant from Legacy*. The grant is to identify water quality impacted sections for failing on-site sewage treatment systems of the homes and businesses in rural areas of North Alabama.
- Several Outdoor Classroom / Environmental Education Proposals have been written that include stations featuring water quality

The Tennessee Basin Management Plan is complete, with assistance being offered to each of the watershed organizations:

- Plans in Process for Flint River
- Flint Creek is being updated
- Cotaco Creek has been completed
- Sand Mountain Lake Guntersville is in progress
- Currently working with Paint Rock Watershed Conservancy District on the completion of their watershed Plan.

Watershed Projects

The Middle Coosa River Watershed Project

The Middle Coosa River Watershed encompasses approximately 2600 square miles in the Northeast section of Alabama. All areas within the Middle Coosa drain into the Neely Henry or Logan Martin Lake sections of the Coosa River, which eventually drains to the Gulf of Mexico at Mobile Bay, via the Alabama River. The Middle Coosa Watershed Project began in May 2001 with the overall goal of effectively focusing federal, state, local, and special interest groups resources on solving predominately rural-based and urban NPS pollution problems in the Coosa River Basin. Cooperative efforts are utilized to maintain, improve, and protect the physical, chemical, biological and habitat conditions throughout the watershed. The ultimate goal of the Middle Coosa River Watershed Project is to meet or exceed state water quality and use classification standards.

The Middle Coosa Watershed Project is in high gear and working cooperatively on many projects. Some of these projects include the installation of urban BMPs, stream restoration projects, and the creation and installation of watershed boundary signs and watershed partner signs. In addition to the previously mentioned projects, 165 cost-share applications for agricultural BMPs have been approved as of August 30, 2005 with practices including the installation of heavy-use area protection, alternative water sources, critical area protection, and cross fencing.

The installation of urban BMPs is a high priority for the Middle Coosa River Watershed project since the watershed's total population exceeds 200,000 people. The James D. Wildlife Park located at the Gadsden Mall has been identified as an area of concern for water quality issues. Seven hundred eighty-five feet of curb has been removed and approximately three feet of gravel was placed to slow the flow of water from the parking lot. Behind the gravel, native shrubs were planted to provide a root structure for the grass and soil and to serve as a pollutant filter. Also, a rain garden has been designed for one corner of the parking lot where most of the runoff drains. This rain garden will be used to clean up the parking lot runoff before it enters the water of the wildlife park, thus removing 60% of the pollution from the runoff. The Urban NPS subcommittee is working with the Gadsden Mall, the City of Gadsden, and the Coosa River Society to implement these BMPs. Another urban BMP that has been identified is a permeable parking lot installation at the North Gadsden Park and/or the Ritz Theatre. This will serve as a demonstration project both locally and statewide as a way to decrease impervious surfaces without losing parking. Lastly, the Middle Coosa River Watershed Project is working with the Pell City School System to create a parking lot with bioretention areas surrounding it.

Rain garden at the Colonial Mall parking lot in Gadsden.

Also as part of the urban stormwater protection activities, the coordinator worked with the City Planner, the Associate City Planner, the City Engineer, the City Attorney, the Gadsden Water Works General Manager, and a private engineer to come up with Storm Water Ordinances for the City of Gadsden. This ordinance was passed and adopted by the city council earlier this summer.

The implementation of two stream restoration projects has been a main focus for the Middle Coosa River Watershed Project in 2005. The project coordinator has worked with ADEM, ACES, NRCS, other partners, and local landowners to implement a rural and an urban stream restoration project which will make them excellent sights for a comparison demonstration project.

The creation and installation of watershed boundary signs and watershed partner signs have also been a priority for the Middle Coosa River Watershed Project this past year. The watershed boundary signs are a great education tool to alert the general public of where the Middle Coosa Watershed boundaries are located in their community. The watershed partnership signs are to be distributed to all farmers that have participated in the cost-share program and to all groups that are part of the Business Partners for Clean Water.

Middle Coosa River Watershed Partnership Signs

One of the successful education projects in the Middle Coosa is the Business Partners for Clean Water program. This program, which began as a cooperative effort between the Gadsden Water Works and Sewer Board, the Etowah and St. Clair Counties Soil and Water Conservation Districts, ADEM, the Alabama Clean Water Partnership and local businesses, has been adopted by the Middle Coosa River Watershed Project. It is designed to give businesses the information they need to comply with water quality laws and to recognize businesses that take voluntary steps to protect local streams and lakes. Brochures were printed and then distributed as an insert in the Gadsden Times. There has been good response to this program, with approximately 20 businesses and 6 schools signed up. A second publication and reintroduction of this program is currently being planned.

The project coordinator was involved with the introduction and facilitation of several additional education and outreach activities in the Middle Coosa River Watershed. A Storm Drain Awareness Initiative, which is a storm drain marking program aimed at 4-H Clubs, Boys and Girls Clubs, scout groups, school groups, and other local groups has been initiated. The program is designed to educate students and other residents about nonpoint source pollution resulting from runoff and litter washing into storm drains. As part of this program, a Storm Drain Marking Initiative was held with Floyd Elementary School students from March to May 2005. The coordinator also assisted with Alabama Power and Keep Etowah Beautiful's “Renew Our Rivers” (Neely Henry) campaign on May 2- 7, 2005 and with their "Message in a Bottle" campaign on October 27, 2005. In addition, the coordinator worked with the R.S.V.P. program, the Etowah County Commission, and Keep Etowah Beautiful to create a prescription drug drop-off day, held on October 21 and 22. Finally, the coordinator was instrumental in the Middle Coosa Watershed Project partnering with the Center for Cultural Arts to provide environmental education activities to the 21st Century Learning Program students.

Partners for the Middle Coosa River Watershed Project include the Alabama Department of Environmental Management, the Etowah County Soil and Water Conservation District, the St. Clair County Soil and Water Conservation District, Gadsden Water Works and Sewer Board, the Natural Resources and Conservation Service (NRCS), the City of Gadsden, the Etowah County Health Department, the St. Clair County Health Department, Alabama Natural Heritage, Keep Etowah Beautiful, Gadsden State Community College, the City and County Schools of Etowah and St. Clair counties, the Alabama Cooperative Extension System, the Alabama Forestry Commission, the Gadsden Center for Cultural Arts, City of Pell City, St. Clair County Commission, and the Colonial Mall Gadsden.


Storm Drain Marking - Floyd Elementary

Herrin Creek Watershed Project

Herrin Creek is identified on the 1998, 2000, and 2002 CWA Section 303(d) list of impaired waterbodies as not supporting its water use classification of Fish and Wildlife for organic enrichment/dissolved oxygen, ammonia, nutrients, and siltation. A Draft TMDL for organic enrichment/dissolved oxygen, ammonia, nutrients, and pathogens was developed in August 2003 and a Final TMDL was approved in September 2003. A Draft TMDL for siltation was developed in February 2002 and a Final TMDL was approved in October 2003.

This project institutes a focused, progressive, results-oriented watershed approach. It leverages agency funding by establishing an incentive and cost-share partnership between the EPA Section 319 program and the USDA Farm Service Agency's Continuous Conservation Reserve Program (CCRP). In general, resource providers and programs tend to apply on-the-ground management practices in a scattered way. While this approach can improve impairments at an individual site, efforts don't always translate into overall enhancement of air, land, or water quality. This project will group together funding for technical assistance and management practices in order to have a greater impact on water quality improvements and natural resources protection at the watershed level.

The development of a watershed protection plan is in progress. Landowners in the watershed are being contacted to determine potential interest in participating in the project.

Cypress Creek Watershed Project

The Cypress Creek Watershed (UWA Category 1) is comprised of 135,360 acres in Lauderdale County in Northwest Alabama within the Tennessee River Basin. As a major water supply for the City of Florence, Cypress Creek provides up to 16 million gallons per day for public water supply in Lauderdale County. Wells within the watershed also exist for both livestock and domestic water supply. The watershed sustains habitat for a variety of fish and wildlife including an estimated thirteen rare, three endangered, and eight "special concern" species.

Cypress Creek Watershed contains three major streams (Cox Creek, Middle Cypress Creek and Little Cypress Creek) with numerous smaller tributaries. The major threat to the watershed is runoff from rural, urban, agricultural, and livestock sources. Increased algae production, reduced dissolved oxygen levels, increased fecal coliform counts, higher turbidity readings, and greater temperature variations have been noted. Portions of the watershed along Cox Creek lie within some of the most highly developed urban areas of Lauderdale County. The City of Florence's Source Water Assessment Program (completed for only a small portion of the watershed) identified 117 sites for potential restoration efforts. Items proposed for implementation through the Watershed Restoration Strategy include promoting best management practices and protecting remaining undeveloped urban riparian buffer/wetland areas, providing additional incentives to landowners in the watershed willing to participate in USDA's Conservation Reserve Program (CRP) to establish 1,000+ acres of forest riparian buffers, fencing livestock out of 15+ miles of stream, and restoring wetlands by reestablishing hydric vegetation.

The original project has been completed. However, additional funds were still available for further implementation of BMP's and a new contract has been executed extending the project for another year. This will ensure all interested landowners have an opportunity to participate in the project. Nearly 540 acres have been planted in riparian buffer during the first phase of the project.

Second/First Creek Watershed Project

The purpose of this project is to organize, build, and strengthen a proactive, sustainable organization and pursue applying BMP conservation practices, education, and restoration efforts within the Second/First Creek Watershed in Lauderdale County. The project will promote best management practices and protect undeveloped riparian buffer/wetland areas by providing additional incentives to land owners willing to participate in USDA's Conservation Reserve Program (CRP) to establish 800+ acres of forest riparian buffers and filter strips, fence livestock out of 5+ miles of streams, restore wetlands by reestablishing hydric vegetation, and improve overall water quality. The watershed will be photographed by air to develop a Second/First Creek GIS database for nonpoint source inventory mapping through TVA's Wheeler Watershed Team. The project will also develop a consistent, applicable, and useful water quality monitoring strategy and watershed information/education materials for use with the Lauderdale County Soil and Water Conservation District in school programs, TVA's "Kid's in the Creek" Program, FFA Clubs in Lauderdale County Schools, 4H Clubs, and Forestry Awareness Week Now Programs.

Currently the Lauderdale County Soil & Water Conservation District is allowing land owners in the watershed to sign up for the program. After the sign-up period is over, the applications will be ranked by the committee to determine how incentives will be allocated.

Mack/Robinson Creek Watershed Project

The Mack Creek (4,915 acres) and Robinson Creek (5,822 acres) watersheds are located within the Tennessee River Basin drainage in north central Alabama. Both watersheds are listed on the Alabama Section 303(d) list for impaired waters. Pasture grazing is the listed cause along 5.4 miles of Mack Creek while agriculture is listed as the cause along 6.3 miles of Robinson Creek. The primary land uses include pasture grazing, row crops, and hay production.

The purpose of the project is to reduce sediment and nutrient loads that impair the water quality of Mack and Robinson Creek, thus removing both segments from the Section 303(d) List of Impaired Waters. This will be done by using agriculture Best Management Practices including streambank stabilization, conservation buffers, buffer zones, rotational grazing, riparian fencing, heavy use areas, stream crossings, and tree planting. It is estimated that this project will result in a total sediment load reduction of 1,438 tons/year for Mack Creek and 1,060 tons/year for Robinson Creek.

A draft watershed management plan was submitted to ADEM in January 2004. One hundred eighty (180) acres have been planted in riparian forest buffer zone resulting in the protection of nearly four miles of streambank. In addition to implementation of riparian buffers, over twenty one (21) acres of hardwood trees have also been planted. Thirty acres of pasture has been planted along with the installation of a pond as an alternate water source.

Fencing in the Mack Creek Watershed

Crowdabout Creek Watershed Project

Crowdabout Creek is identified on the 1996, 1998, and 2000 CWA Section 303(d) list of impaired waterbodies as not supporting its water use classification of Fish and Wildlife. A Draft TMDL for organic enrichment/dissolved oxygen, nutrients, and pathogens was developed in August 2003 and a Final TMDL was approved in September 2003. A Draft TMDL for siltation was developed in February 2002 and a Final TMDL was approved in October 2003.

A watershed protection plan was submitted to the Department in December 2004. Under the plan, nearly one hundred acres have been planted in riparian forest buffer zone resulting in the protection of nearly three miles of streambank. In addition to implementation of riparian buffers, 3 acres of hardwood trees have also been planted. Interest in the incentive payments is growing and landowners are inquiring to determine if their land applies. Seventy-five percent of the remaining funds should be allocated to participating landowners within the next year.

Bear Creek Watershed Project

This project will provide funding for a watershed coordinator to holistically provide technical assistance as well as education and outreach to Bear Creek Watershed stakeholders, in order to reduce pollutant loadings, restore impaired waters, and to protect unimpaired waterbodies. Although management practice implementation is a major component of Bear Creek Watershed activities, this grant does *not* fund any management practice directly. The watershed coordinator will be responsible for developing a local Bear Creek Watershed plan and leveraging dollars and partners for implementation of practices already funded from other sources.

A new watershed coordinator was hired during the summer of 2005 and work is ongoing in the development of a watershed management plan for the Harris Creek watershed. Partners in this effort include the Tennessee Valley Authority, Goldkist, and the Franklin County Soil and Water Conservation District. The watershed coordinator is also assisting with the Envirothon competition for area high school students.

Dekalb County Watershed Projects

The four watershed projects that are currently being implemented by the Natural Resources Conservation Services in Marshall and DeKalb Counties, the DeKalb County Soil and Water Conservation Service and the Tennessee Valley Authority (TVA) include: The Short-Scarham Watershed Project, the South Sauty Watershed Project, the Town Creek Watershed Project and the Upper Coosa Watershed Project. The primary concerns within these watersheds cited by the local advisory group include excessive animal waste applied to land; an inadequate supply of water for the proper rotation of livestock; nutrients, bacteria, and low-dissolved oxygen in surface and groundwater; and erosion and sedimentation from cropland areas. The remediation of problems in non-irrigated crop production, animal feeding operations, failing septic systems, and pasture grazing are being targeted within these watersheds. Problem areas within these watersheds were identified using the Soil and Water Conservation District's Watershed Assessment and TVA's Integrated Pollutant Source Identification Model (IPSI). The IPSI modeling has aided in concentrating funds in problem areas to ensure maximum benefits.

Alternative Watering Source for Cattle

Over the past year, the following on-the-ground BMPs were installed. In the Short and Scarham Creeks watershed, two alternative watering sources for cattle and two areas of exclusion fencing were installed. In the South Sauty Creek Watershed, an incinerator was installed. In the Town Creek Watershed, three drystacks, two areas of exclusion fencing, an alternative watering source for cattle, and the seeding of 4 different pastures were completed. In the Upper Coosa Watershed, the seeding of a pasture, an area of exclusion fencing and three alternative watering sources for cattle were installed. To date, approximately 70 applications have been approved for all of these watershed projects combined and efforts are ongoing to install these BMPs in an effective and timely manner.

In addition to the installation of BMPs, there have been ongoing education and outreach efforts within the DeKalb County watersheds. A watershed coordinator was hired to aid in the implementation of some of these efforts. Over the past year, some of these efforts include over 50 presentations on water quality, conservation of natural resources, presentations to local area classrooms, an Alabama Water Watch monitoring training workshop for teachers, news releases in local newspapers, and participation in the Collinsville High School's Agriscience Conservation Day.

Point A-Gantt Lake Sedimentation Project

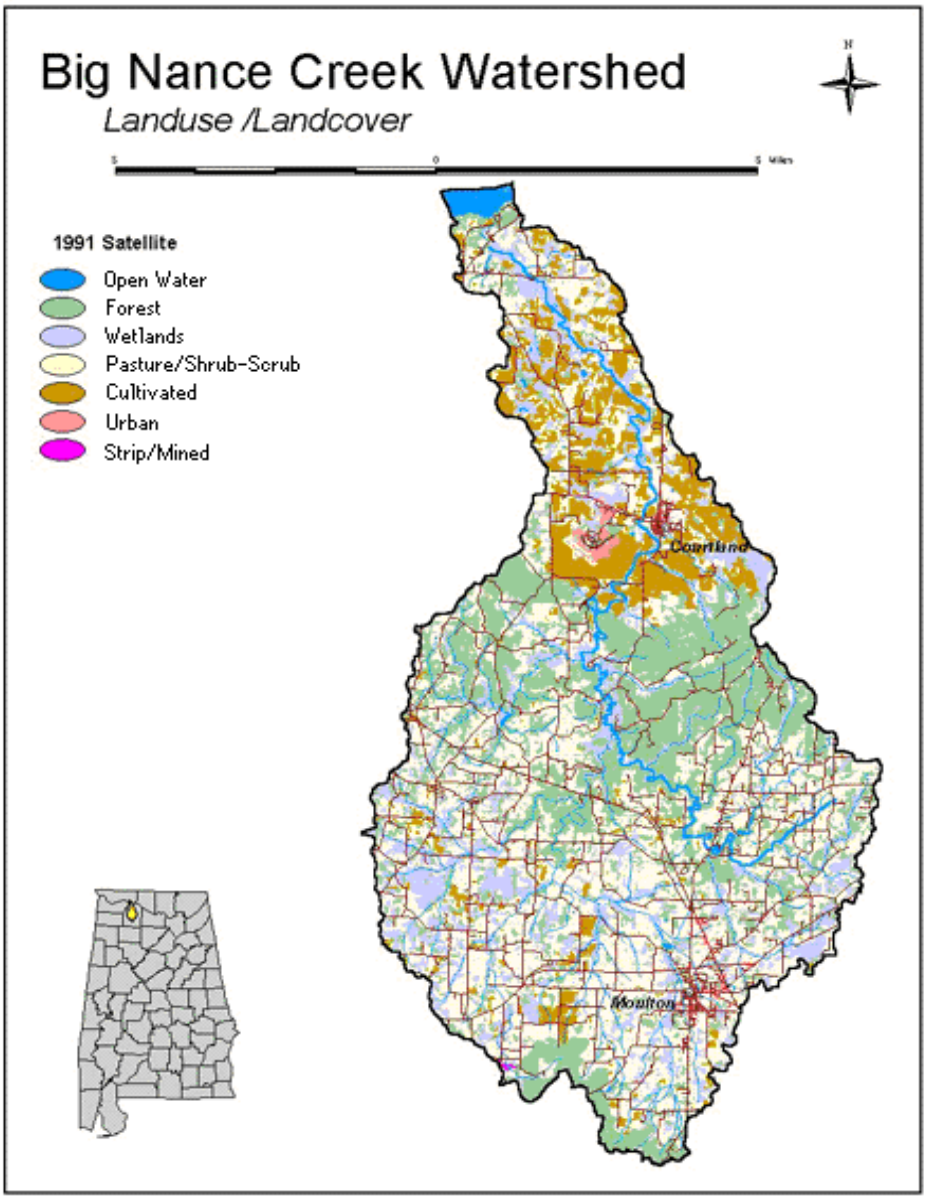
The Point A-Gantt Lake Sedimentation Project is in the final stages of completion. The Holiday Hill and C.W. Green Roads have been experimental projects coordinated by the Alabama Department of Environmental Management, Natural Resource Conservation Service, Covington County Soil and Water Conservation District, Covington County Commission, and the Geological Survey of Alabama.

Sediment from dirt roads is a major problem in this watershed. After a rainfall large amounts of soil from dirt road surfaces and deep ditches are deposited into Point A and Gantt Lakes. Holiday Hill Road, which is adjacent to Point A, utilized a curb and gutter system, shaping of banks and planting of vegetation to safely lower runoff water to the bottom of the hill while rock flumes and crusher run material were utilized at the C.W. Green Road site. A crusher run consists of different sized limestone rocks and "fines" which serve to bind the materials together (See Figure 1). It is estimated that the installation of best management practices at the above mentioned and two other sites will reduce sediment loading from 2,250 tons to 38 tons per year into Point A and Gantt Lakes. The lakes are impoundments/ segments of the Conecuh River and are on the current 303(d) list for sedimentation. Post monitoring data is in the process of being gathered with the final load calculations expected by October 2006.

Crusher Run Application on C.W. Greens Road

Big Nance Watershed Project

The goal of the Big Nance Watershed Project is the implementation of a dynamic and effective project designed to achieve and maintain beneficial uses of water, maintain water quality standards, and facilitate removal of Big Nance Creek from the CWA 303(d) list.



Located in the fertile Tennessee River Valley in northwest Alabama, the Big Nance Creek Watershed encompasses 194 square miles in Lawrence County. The area is the second biggest producer of cotton in the state and has been in agricultural production for over 180 years. Livestock and poultry production also contribute significantly to the local economy.

In 1996, Alabama listed 16.9 miles of Big Nance Creek as non-supporting of state water quality standards for fish and wildlife. The primary problem was polluted runoff that contains sediment, pesticides, and nutrients. Local leadership and landowner interest in restoring Big Nance Creek was the catalyst for development of the Big Nance Creek Watershed Project. The centerpiece of the project was a grant awarded through the Department's Nonpoint Source Program. In August 1999, the Lawrence County Soil and Water Conservation District entered into a contractual agreement with the Alabama Department of Environmental Management to implement a variety of BMP's in an effort to improve the quality of the Big Nance Creek Watershed. These practices were based on traditional conservation practices addressing livestock grazing management on pastureland, nutrient management plans for poultry operations, and land treatments for cropland runoff.

A number of new alliances and partnerships have been forged between local, state, and federal agencies, as well as individuals through the implementation of the project. The partnership followed a plan of action that was built on early individual efforts to improve the land and water. By emphasizing comprehensive monitoring and assessment, implementation of conservation practices, and education/outreach for community leaders, the Big Nance initiative has provided the tools for achieving coordinated restoration throughout the watershed. None of these efforts could have been possible without cooperation of all those agencies and individuals involved in the project. These partners include the Lawrence County Soil and Water Conservation District, the Lawrence County Public Works Department, the Lawrence County Board of Supervisors, the Tennessee Valley Resource Conservation and Development Council (RC&D), the Alabama Department of Environmental Management, the Alabama Game and Fish Division, the Alabama Soil and Water Conservation Committee, the Geological Survey of Alabama, Alabama Water Watch, the Alabama Department of Agriculture and Industries, the Alabama Department of Public Health, Ducks Unlimited, the Southeast Conservation Buffer Campaign, the U.S. Fish and Wildlife Service, the Natural Resources Conservation Service, the Farm Services Agency, and the Tennessee Valley Authority. The community's ownership of the watershed was demonstrated by the local residents who worked closely with the partner agencies to set goals for improving the condition of the watershed.

The implementation of conservation treatments on the landscape for pasture and cropland management was accomplished by landowners with the assistance of the NRCS. The budget for the project was just over $1,000,000 with $603,982 contributed in federal funds via the 319 program and $402,655 from non-federal sources. The on-the-ground practices targeted streamside restoration, grazing management on pasturelands, erosion and nutrient runoff controls on croplands, and animal waste (nutrient) management.

During the five year duration of the project a total of 1,566 acres was planted in trees to enhance riparian buffer areas. As a compliment to this practice, livestock were excluded from 4,395 acres of land using 3.5 miles of fencing and five stream crossings were installed as part of the livestock exclusion efforts. In areas where cattle were excluded from waterways, alternate water sources were provided by the construction of twenty-two ponds, both dug and earthfill, and one trough installation. Animal waste management was addressed by the installation of a number of conservation practices including the construction of six dry stacks and two drystack/composter facilities, installation of three incinerators, and protection of three heavy-use areas. Additionally, no-till cotton production has become the norm within the watershed. Initially, one of the larger producers began utilizing the practice. This effort demonstrated the feasibility of the conservation ethic and also drew attention to the efforts of the partners involved with the project. Currently, ninety percent of the cropland within the watershed is using the no-till method as a component of cotton production.

Although the results of the project and conservation practices put in place in the Big Nance Watershed may not be seen for many years to come, there are already some indications that the water quality in the watershed has improved. Big Nance Creek was removed from the CWA 303(d) list for siltation in 2004 and for pesticides, ammonia, OE/DO, and pathogens in 2002. The implementation of such practices as critical area planting, pasture planting, riparian buffer planting and the use of conservation tillage as part of the watershed project may have been a contributing factor to the improved status of siltation in Big Nance Creek. In addition to these practices, the installation of dry stacks, incinerators, composters, and the exclusion of livestock from waterways within the watershed all potentially impacted the reduction of pathogens, ammonia, and OE/DO. Monitoring will document any changes in the water quality in the Big Nance watershed.

Before restoration: A close up view of eroding streambanks. (1998).

After restoration: a view of the streambank one year later (1999) after installing streambank bioengineering; planting native trees, shrubs, and grasses; and restoring wetland water regime with control structures.

Duck River Watershed Project

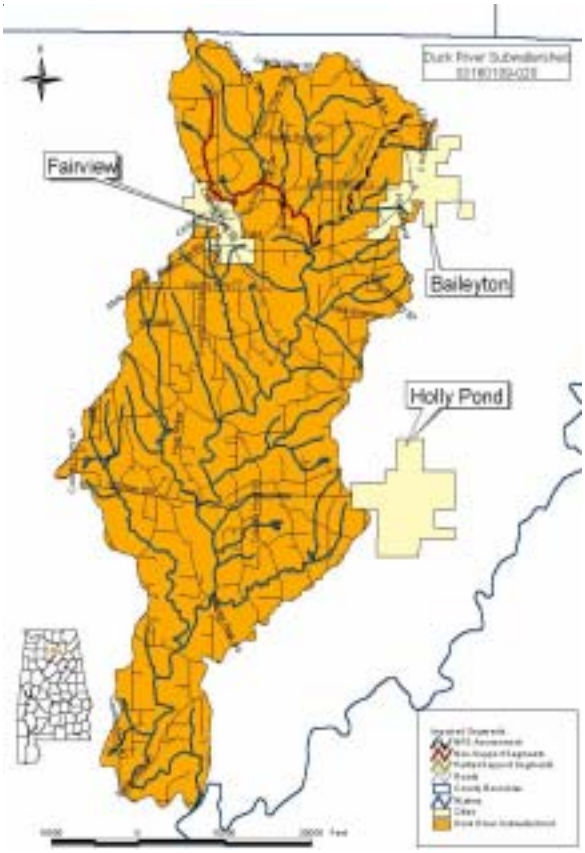
The Duck River Watershed drains to Mulberry Fork and ultimately to the Black Warrior River. The watershed comprises over one-third of the 118,400 acre Duck Creek-Mulberry Fork Conservation Priority Area (CPA) in east Cullman and West Blount Counties. The 1996 Section 303(d) list of priority waters identifies 6.4 miles of Duck River in Cullman County as non-supporting of water quality standards. Impairments are related to pH (low), nutrients, and organic enrichment/dissolved oxygen. Primary pollution sources are generally agricultural, specifically relating to animal feeding operations and pasture grazing.

Gully Renovation

The Duck River Watershed Project began November 22, 1999. The local staff of NRCS, the Cullman County Soil & Water Conservation District employees, and the Watershed Coordinator Tim Scott have personally met with over sixty landusers within the watershed to discuss the watershed project. The Duck River project started with $291,000.00 available for cost share practices. As the project continued, additional money became available from other state projects, with $30,000 added for BMPs, for a total of $321,000. All of the dollars were obligated and reimbursed to the local producers. The project was extended for one year to allow better utilization of the funds.

Duck River BMP Installation

One animal waste vendor building was placed within the watershed. This allowed the vendor to store poultry litter from his producers during the winter months. This type of structure enabled the consolidation of several structures on one site rather than several scattered on small farms where they would be under-utilized. This saved the small producers money while saving cost share dollars for other uses. These structures have also helped with the transporting of litter from north to south Alabama. Both NRCS and the Tennessee Valley RC&D have programs that help with the transportation cost of trucking the litter. There are expectations in the future to utilize this practice for a bio-energy project that is being considered in the area.



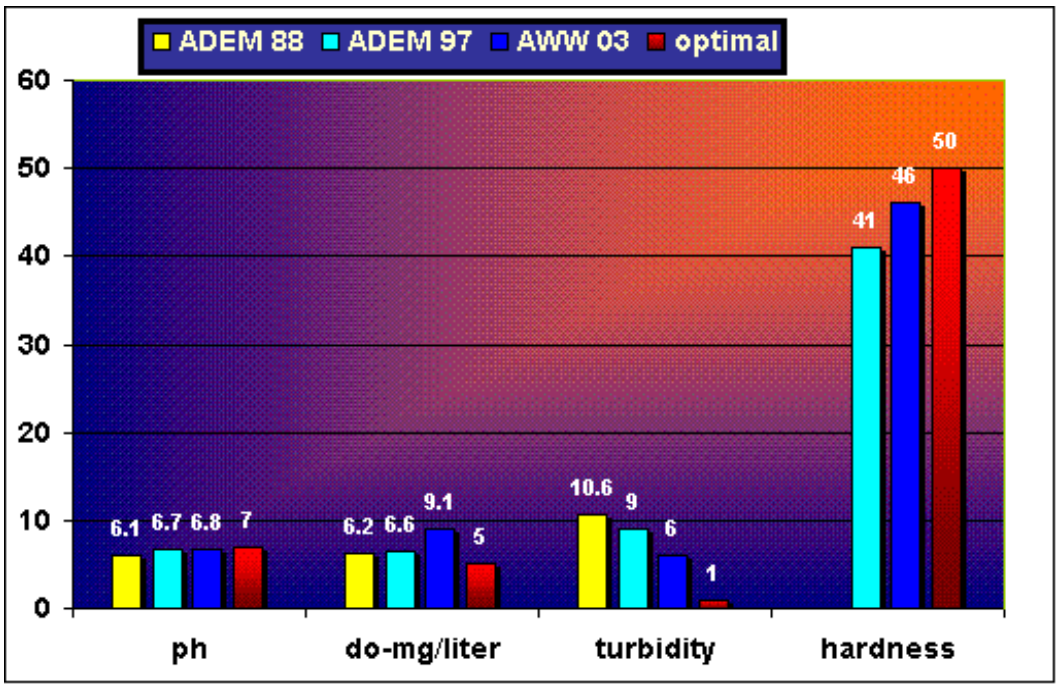
Another grant utilized in the Duck River Watershed came from the Black Warrior Basin. Several feet (53,820) of rotational fencing were placed in operation, along with 5 alternative watering sources, 18 dry stacks, and 2 winter feeding areas for cattle. By preventing the feeding of cattle close to the stream, the winter feeding areas for cattle should prove to be very beneficial to water quality.

Two waste storage lagoons were removed from the area. The nutrient value of the waste was tested in these lagoons and the material was spread on grass crops. After the wet material and the solid material were removed, the lagoons were covered with clay and totally removed from operation. Both of these lagoons were at facilities that were not in operation and were not being maintained. These lagoons had the opportunity to overflow during high rainfall events.

With this project, the District was able to help fund alternative ways of disposing of dead birds. Four "pits" were removed and replaced with incinerators. Though once thought the best way to dispose of the birds, the pits were found to be detrimental to water quality and were later removed from the list of approved disposal methods. The incinerators were placed on smaller operations where a composter was not needed. The District was also able to help producers with the placement of 9 composters for disposal of dead birds in an environmentally friendly way. The compost was then spread on crops as a soil amendment. The composting process also reduces odors associated with the incineration of the dead birds.

Sixteen dry stack buildings were designed and built in the watershed to hold the litter during the winter months when the crops could not utilize the nutrients. According to load reduction models provided by EPA, this method of disposal can reduce nitrogen and phosphorous loading about 60% to 70% in the watershed.

With the utilization of 319 funds, the District was also able to fund 4 watering facilities that enabled the producers to prohibit the livestock access to the streams. These troughs allowed the producers to rotate the cattle to several paddocks.



Eights farms were provided with plans for rotational grazing systems which resulted in better utilization of forage and an increased production on the same type of ground. A couple of these farms are using intensive rotational grazing, where the producers rotate on a tight schedule with the use of low cost electric fencing. This also created buffer strips around the streams that reduce runoff. Most of the cross fencing was accomplished as in-kind expense, thus saving cost share dollars for other projects. Two ponds were also constructed with the help of this project. These water sources either had a heavy-use area constructed so the cattle could only have access to a certain area around the pond or they had a trough placed below them for the water supply.

The District cost-shared on 11 different heavy-use area protection practices in the watershed (31,285 sq. ft.). These areas were designed for feeding areas, watering areas, stream crossing areas, or cattle working areas. This practice allows for the armoring of an area where there is very high livestock traffic, usually where the cattle are fed. This alleviates the mud and sedimentation that is associated with livestock feeding in wet months.

Water Quality Monitoring

The District had a monitoring program in place for several years with data collected at 13 sites on a routine basis. The monitoring program utilized Alabama Water Watch parameters and included pH, dissolved oxygen, turbidity, hardness, and temperature. This data was collected the third week of every month between 10 a.m. and 2 p.m., rain or shine. The data was averaged over time and the results of the monitoring were compared to the data that ADEM had collected in prior years. The monitoring data did show water quality improvements over the past several years.

Heavy-use area stream crossing for cattle

Educational Programs

Other grants received by this Project helped with supplies for educational programs at local schools. The Tennessee Valley RC&D was awarded a $2,500 grant to help with the startup of the Cullman Water Festival. This festival has been conducted for four years now, with all of the 4th grade students from the city and county attending. The District has also conducted many other educational programs in the schools, at parks, and also in outdoor classrooms. The Coordinator has presented Life in a Fishbowl, Sammy Soil, Water Cycle, Tracks, F.A.W.N., and other programs. All of these presentations are set up for different age groups from Pre-K classes through 6th grade. Since 1999, the District has reached approximately 44,907 students through conservation education programs.

The Cotaco Creek Watershed Projects

The Cotaco Creek watershed encompasses 268.9 square miles, comprised of 176,376 acres with 84.1% in Morgan County, 13.9% in Marshall County and 2% in Cullman County. The watershed is comprised of 47% forests, 44% pastureland, 5% cropland and 4% classified as "other". The Cotaco System is listed as a state priority watershed in the Alabama Unified Watershed Assessment Report in addition to being listed on the state's 303(d) report. Town Creek, Cotaco Creek, and West Fork Cotaco Creek are listed on the 303(d) list because of organic enrichment/dissolved oxygen and pathogens, with agriculture identified as the main source of these problems.

Cotaco Creek Watershed Project Logo

The agricultural activities in the watershed include beef cattle, dairy operations, poultry operations, and forestry. Agricultural nonpoint source pollution and runoff contribute to nutrient loading which leads to organic enrichment and low dissolved oxygen levels. Lack of adequate livestock waste control measures and animal access to streams can cause bacteria levels in local tributaries to become elevated during storm events which degrade aquatic habitat and threaten protected species and human health. In addition, illegal dump sites, septic tanks, and urban runoff are human contributors to pollution in the watershed.

To restore water quality and ecological health in the Cotaco Creek watershed, a multi-year coordinated effort among federal, state, and local agencies, state and local interest groups, and landowners was initiated in 1998 to assess the pollution impacts and the actions required to improve water quality in the watershed. Several informal meetings were started in late 1998 and continued until 2001 among agency and interest group representatives, landowners, and concerned citizens which led to the implementation of Section 319(h) projects in the watershed.

There are two ongoing Section 319(h) projects in the Cotaco Creek watershed. The first project is the Cotaco Clean and Green Watershed Project which began in 2001 and the second project is the Cotaco Creek Siltation/Pathogen Reduction Project which began in 2003. Both projects are scheduled to end in 2006. The primary goal of both of these projects is to focus federal, state, and local resources on solving predominately rural-based nonpoint source pollution problems in the Cotaco Creek Watershed through cooperative efforts that maintain, improve, and protect the physical, chemical, biological, and habitat conditions throughout the watershed.

To promote a successful NPS education and outreach program, a part-time watershed coordinator has been employed with the primary focus of bringing awareness to the residents about the Cotaco Creek watershed, mobilizing their concerns into actions, and coordinating NPS activities among the various cooperating agencies and organizations. Project members and sponsors for both projects include the Morgan County Soil and Water Conservation District, the Marshall County Soil and Water Conservation District, the Cullman County Soil and Water Conservation District, the Morgan County Commission, the Natural Resource Conservation Service, Tennessee Valley Authority, Auburn University Cooperative Extension Systems, the Alabama Rivers, Mountains, and Valleys Resource Conservation and Development Council, Alabama Water Watch Association, the Alabama Department of Environmental Management, the Cotaco Creek Environmental Club, Brewer High School Ecology Club, Farm Service Agency, Alabama Forestry Commission, U.S. Fish and Wildlife Service, Pine Hill Camp, and Calhoun College.

Heavy Use Area and Alternative Watering Source for Cattle

Limited Access Pond Under Construction

There have been a number of on-the-ground BMPs installed in the Cotaco Creek Watershed. These BMPs include, but are not limited to, rotational grazing systems, heavy-use area pads, critical area cover, conservation tillage, 6 drystack composters, 8 alternative watering sources for livestock, several miles of fencing, many acres of pasture recovery, a waste storage facility, and an in-vessel drum composter.

Estimated load reductions have been determined for nitrogen and phosphorus within the Cotaco Creek Watershed. An estimated 394,412 lbs/year of nitrogen and 83,806 lbs/year of phosphorus have been calculated using the Region 5 Model. This calculates to a 74% reduction in nitrogen and a 77% reduction in phosphorus due to the implementation of fourteen BMPs on eight farms within the Cotaco Creek Watershed. The watershed coordinator received STEPL training in August of 2005 and is currently making headway in determining the estimated sediment load reductions within this watershed. (Note: Load reductions estimates were calculated based only on the implementation of BMPs for the FY2002 The Cotaco Siltation/Pathogen Reduction Project.)

Environmental Conservation Education Program

The Outdoor Environmental Study Area at Brewer High School has been completed. A committee of teachers developed components for the study area and students are working to develop other projects for the study area. The priority components will deal with NPS-Pollution in the watershed. These components are bringing different disciplines to the study area such as History, Art, and Agribusiness. This will hopefully bring more students to the area on a regular basis and help make the study area's purpose more effective. These components will be added throughout the final two years remaining on this project. The site utilizes a Nature Trail already developed by the schools Ecology, Science and AG classes. The Cotaco Clean and Green project has built a 24' x 36' covered outdoor classroom at the site. A mini-grant from the State Soil and Water Conservation Committee in the amount of $3,000.00 has been received and used to expand the Study Area and upgrade the walking trail.

The Morgan County Soil and Water Conservation District partnered with Pine Hill Camp in Morgan County to deliver an Environmental Conservation Education Program. This program utilizes canoes bought with grant funds and a new canoe launch being constructed by the Morgan County Commission on Cotaco Creek. The project coordinator took 40 to 60 Jr. High students from Pine Hill Camp on a full day trip down Cotaco Creek. Stops were scheduled along the creek where professionals from different agencies performed 30 minute education programs. These activities include basic water chemistry sampling with Alabama Water Watch test kits and bio-assessments on streams along the creek. The Morgan Soil and Water Conservation District has provided environmental and conservation programs focusing on the Watershed Concept. Other agencies that have assisted are the Tennessee Valley Authority, the Geological Survey of Alabama, the

Cotaco Creek Education Program

Pasture Renovation on the T. Stanely's Demo Farm

Jay Grantland with T. Stanley - Conservation Security Protection Award

Tennessee Valley Resource Conservation and Development Council and the Auburn Extension Office. This education program has been extended over the past year to include Calhoun College. Ecology and Biology classes are participating in the program in order to meet accreditation criteria. Four professors and the Cotaco Creek Watershed Coordinator have developed a macroinvertebrate curriculum which includes classroom activities as well as field work.

The Alabama Natural Heritage Program of the Nature Conservancy completed a study of threatened and endangered species located within the Cotaco Creek Watershed. The primary purpose of this study was to identify, remediate, or prevent habitat loss and degradation of various threatened and endangered (T & E) flora and fauna within the Cotaco Creek watershed. The scope of this project was to locate, assess, and quantify sensitive areas and habitats for T & E species and identify potential NPS land use stresses related to the watershed. As an overall measure, the biodiversity of these watersheds has been analyzed through identification of sensitive species and community occurrences indicative of the watershed's health. Areas within the watershed that showed higher occurances of T & E species are given a higher priority so that on-the-ground BMPs can be strategically placed to protect these species. The Cotaco Creek Watershed Project has named Thornton Stanley's "Diamond S Farm" as the watershed project's demonstration farm. This 380-acre farm borders a segment of Cotaco Creek and was the site of the signing ceremony for the United States Department of Agriculture's, Natural Resource Conservation Service, Conservation Security Program. This farm is a perfect example of a sound conservation farm plan. Visitors are welcomed to tour the farm which has dozens of conservation BMPs installed with Farm Bill Programs, ADEM Section 319 grant funds, and State Cost Share funds.

Other federal sources of funding, besides Section 319 funds, have been utilized in the Cotaco Creek watershed which has been important to the success of the Cotaco Creek Watershed Project. Some of these programs include the Environmental Quality Incentives Program (EQIP), Farm Bill funding, the Grassland Reserves Program, the Forestry Incentives Program (FIP), the Conservation Security Program (CSP), Conservation Innovation Grants (CIG), the Wildlife Habitat Incentives Program (WHIP), and the Conservation Reserve Program (CRP).

These Cotaco Creek watershed projects have been very successful in completing the outlined objectives and have also received grants that amount to an additional $500,000.00 to further their project goals. Additional grants have been applied for to address the specific problems created by karst topography, which dominates the watershed. Three more grant proposals have been submitted in 2005 that total over two million in federal funds. These grants (NRCS Conservation Innovation Grant, EPA Targeted Watershed Grant, and Alabama Forests Forever Grant) target specific sub-watersheds and will bring the watershed closer to meeting its water quality designated use classification standard, thus facilitating the removal of these 303(d) listed segments from the Alabama Section 303(d) list.

West Fork, a tributary of Cotaco Creek, has received Section 319 funding and work for a streamside buffer project is scheduled to begin in the spring of 2006. With this project, areas of the West Fork Creek watershed will be prioritized based on aerial photographs, on-the-ground assessments, soil types, and the threatened and endangered species study completed by the Alabama Natural Heritage Program of the Nature Conservancy.

Yellow Bank Creek & Goose Creek Watershed Projects

Yellowbank Creek and Goose Creek are located in Madison County and are tributaries of Flint River in the Tennessee River Basin. Yellow Bank Creek has a drainage area of 9.27 square miles and Goose Creek has a drainage area of 11.8 square miles. The primary land uses within both watersheds are agriculture and urban with about fifty percent of the watershed forested.

Heavy-Use Feeding Area in the Yellow Bank Creek Watershed

The main goals of the Goose Creek and Yellow Bank Creek Projects are to develop watershed-based plans and implement best management practices for addressing TMDL sources and causes. These projects are designed to bring Goose and Yellow Bank Creeks into compliance with state water quality use classifications and water quality criteria. A kickoff meeting for both projects was held on January 27, 2005 at the library of New Hope High School, with eighteen people in attendance.

A continuous sign-up has been announced and applications are being taken. Two applications have been taken from the Goose Creek Watershed, and two applications have been taken from the Yellow Bank Creek watershed. Farm visits have been performed and conservation plans have been developed for these landowners to reduce soil erosion and the amount of nutrients/organics from entering the creeks.

The two landowners in the Goose Creek Watershed have volunteered for on-the-ground BMPs which include critical area planting on a total of 41.0 acres. They will also implement proper grazing practices by installing 400' of cross fencing which will assist in a rotational grazing system and nutrient management on 70.5 acres. Additional practices to be installed includes heavy-use area protection on two frequently used cattle feeding locations, an alternative watering source for cattle, and a gravel and geo-textile cloth stream crossing on a tributary to Goose Creek.

The two landowners in the Yellow Bank Creek watershed have also volunteered for on-the-ground BMPs which include the installation of heavy use area protection at three locations where cattle frequently gather for feeding, pasture improvements on 50.0 acres, and conservation tillage on 150.0 acres.

Load reduction estimates for Goose and Yellow Bank Creeks were determined by the Tennessee Valley Regional Research & Extension Center, Agronomy and Soils Department of Auburn University prior to the installation of BMPs. Computer simulation models were used to predict critical areas, estimate nutrient and sediment load reductions, and help watershed planners better utilize funds for BMP implementation. The models that were used include the Soil and Water Assessment Tool (SWAT) and the Annual Agricultural Nonpoint Source Pollution (AnnAGNPS) model. These models concluded that sediment will be reduced by 6.8 tons/yr., nitrogen will be reduced by 6.7 lbs/yr and phosphorus will be reduced by .69 lbs/yr in the Yellow Bank Creek Watershed. In the Goose Creek Watershed, sediment will be reduced by 4.1 tons/yr, nitrogen will be reduced by 8.6 lbs/yr and phosphorus will be reduced by 0.77 lbs/year. The data from these models was also used to provide watershed stakeholders with valuable information for producing and implementing a watershed management plan for the Goose and Yellow Bank Creek Watersheds.

In addition to the implementation of on-the-ground BMPs, outreach and education efforts continue in the watershed. Elementary schools located in both watersheds attended the Madison County Ground Water Festival and learned about watersheds, nonpoint source pollution, and conservation practices on May 10-11, 2005. The Madison County SWCD presented on the ADEM Nonpoint Source Pollution Program at the Optimist Club of Huntsville on June 30, 2005. Earth Day was held at the J. D. Hays Wildlife Preserve just North of Goose Creek on April 16, 2005. A Flint River Watershed booth was set up and handouts and applications were available to the public for the Goose and Yellow Bank Creek projects.

Catoma Creek Watershed Project

The Catoma Creek Watershed, located mostly within Montgomery County, covers about 360 square miles and drains to the Alabama River. The rural portion of the watershed covers about 258 square miles. The remaining portion of the watershed, 102 square miles, is urban/suburban associated with the City of Montgomery.

This project consists of implementing several components of the *Catoma Creek Watershed Management Plan* including on-the-ground improvements to reduce erosion, providing a riparian buffer, improving aquatic habitat, performing water quality, biological habitat monitoring to assess the benefits of on-the-ground management measures, and providing nonpoint source pollution education and outreach.

An announcement for the Section 319 Best Management Practices portion of the project was sent to all property owners on the FSA list in April 2004. Applications were accepted through the end of May, and projects were selected in June and July. The following practices were selected for installation in the watershed as part of the Section 319 grant project:

- Pipeline - Install total of 8,771 ft. (171 ft. completed)
- Prescribed grazing (rotational grazing) – 1,696.1 ac.
- Nutrient management – 1,696.1 ac.
- Pest management – 1,696.1 ac.
- Watering facilities (troughs) – 18 (6 complete)
- Fencing – Install 38,216 linear ft. (Installation underway on multiple sites)
- Stream crossings - 1
- Critical area planting - 10 ac.
- Stream habitat improvement management - 115.6 ac.
- Retention pond - 1 (complete)
- Well – Install 2 (1 complete)
- Pasture and hayland planting - 36 ac.
- Heavy use protection areas – 11 ac.
- Manure transfer (lagoon) wastewater irrigation - 400 ac. (complete)
  Irrigation on these three malfunctioning lagoons is complete. After solids in the lagoons dry, they will be land applied, and the lagoons will be closed out permanently.
- Lagoon close out and renovation – 3
  These lagoons (same as referenced above) are located on a former dairy farm. The lagoons had not been maintained properly for several years, and the equipment to maintain the lagoons was no longer operational. After beginning to work with the property owner, due to challenges with maintaining his operation, the owner made the decision to convert the operation solely to beef cattle. This eliminated the need for the lagoons. The property for this practice is located near the confluence of Ramer Creek and Little Catoma Creek, which is where the portion of Catoma Creek that has a Total Maximum Daily Load for low dissolve oxygen/organic enrichment begins.
- Conservation crop rotation 385.4 ac. (complete)
- Contour farming 385.4 ac. (complete)
- Cover crop 385.4 ac. (complete)
- Residue management 385.4 ac. (complete)

Numerous applications for Section 319 projects were received from property owners. In most cases, the properties that were not selected for a Section 319 BMP project were referred to, and funded through, other programs. For example, a riparian restoration and habitat management project was funded through the Conservation Reserve Program. Another example is that of a local sod farmer. The farm was brought to the attention of the Catoma Creek Advisory Committee during a meeting in early 2004. The property owner had recently purchased the property and decided to clear and grade the banks of the tributaries on his property because it was not aesthetically pleasing. Once the clearing and grading was complete the farmer began to lose topsoil during heavy rains. A MWWSSB employee noticed the change in the streams while taking a monthly sample at a bridge adjacent to the property. This employee photographed the stream, compared it to older

Education and outreach efforts being performed in the Catoma Creek Watershed.

photographs, and shared this information with committee members. One of the committee members knew the property owner and set up a meeting with some advisory committee members to discuss potential problems with the clearing and grading in a 303(d) listed watershed. After visiting with the property owner and farm manager on several occasions, it was decided that Section 319 would not be the best source of funding for the project. Instead, the property owner could apply for EQIP funding for grass to stabilize the streambanks. Almost one year after the grass was planted, the streambanks have started to restore themselves.

The Catoma Creek Watershed Education/Outreach Committee is currently working on partnering with an "at-risk" school, Peter Crump Elementary. Meetings have been held with representatives from the Montgomery Public School Board, and school board officials are supportive of these efforts. During the 2004/2005 school year, committee members have made plans and have permission to go to the at-risk school at least four times to educate third graders about water quality protection activities.

Water quality data being collected in the Catoma Creek Watershed.

The Catoma Creek Education/Outreach Committee members also worked on setting up and staffing an annual display at the Alabama National Fair, which is held at Garrett Coliseum in Montgomery. The 2005 display focused on general issues, such as litter prevention. It was set up from October 7 through October 16. By setting up these displays, several hundred people were able to learn about water quality, issues in the Catoma Creek watershed, and pollution prevention.

The 2005 Montgomery County Water Festival was held at Auburn University Montgomery on March 17 and 18. Approximately 2,310 fourth graders and 105 teachers from Montgomery County public and private schools participated in the 2005 event. An estimated 150 volunteers provided assistance with the event. As in 2004, students participated in three hands on activities including making a water cycle bracelet, a mini-filtration activity, and making an edible aquifer. Children were also entertained by Jack Golden, an "environmental" entertainer.

The Catoma Creek Watershed Advisory Committee meets on a quarterly basis or more frequently as the need arises. The committee is comprised of a diverse group of stakeholders who represent various governmental entities and private organizations. Committee meetings focus on discussing watershed issues and reporting on program activities and plans. The Catoma Creek Watershed Education Outreach Committee meetings are held bimonthly or more frequently as the need arises. These meetings focus on planning educational activities to teach those who live and work in the Catoma Creek Watershed about minimizing nonpoint source pollution. The Montgomery County Water Festival Committee meets nine months out of the year to plan the annual Water Festival.

A Section 319 Grant Partners Committee was formed during the contracting phase of the project. Grant partners meet on an as needed basis to discuss and resolve issues that arise as the project moves forward. The Grant Partners Committee was also responsible for selecting the Best Management Practices to be implemented. Members of this committee include representatives from MWWSSB, CH2M HILL, Montgomery County NRCS, Montgomery County Soil & Water Conservation District, and Auburn University Montgomery (AUM).

The biological, chemical, physical, and habitat conditions are being monitored and analyzed in various Catoma Creek watershed tributaries by the MWW&SSB and AUM scientists during the project duration. Water quality monitoring takes place no less than a monthly basis at 13 standard sites, which are located throughout the watershed. This monitoring is conducted by the MWWSSB and analysis takes place in the MWWSSB laboratory. Sampling tests have also been established around each Section 319 BMP site. For each of the eight BMP sites, there is a sampling site above the BMP, in the vicinity of the BMP and below the BMP. Some sites are located on adjacent properties, where owners have allowed access for downstream sampling. Some water quality sampling has taken place at the BMP monitoring locations. However, sampling has been difficult at two locations due to one tributary being an intermittent stream, which has been dry most of the spring and summer months, and due to limited access and stream depth at the other site. Biological (fish) monitoring has not been conducted to date but will be conducted at the appropriate time. The project coordinator and committee members have also been cooperating with Auburn University researchers on a bacterial source tracking study to help determine the sources of pollutants in Catoma Creek.

Upper Coosa River Watershed Project

The Upper Coosa River Watershed includes Weiss Lake, located in central Cherokee County. Weiss Lake consists of the Coosa River from Weiss Dam to the Alabama/Georgia state line in the upper Coosa River Basin and has a total surface area of 30,028 acres (approximately 47 square miles) , 447 miles of shoreline, and a watershed area of approximately 852 square miles. The Upper Coosa River Watershed drains directly into the Middle and Lower sections of the Coosa River, which eventually drains into the Gulf of Mexico at Mobile Bay, via the Alabama River.

Water quality issues in the watershed include failing septic systems as well as nonpoint source pollution from urban runoff, row cropping, livestock operations, and nursery operations. This section of the Coosa River is listed on the 1998 303(d) List for the following parameters: priority organics, nutrients, pH, and organic enrichment/dissolved oxygen. In addition, the lake has had several fish consumption advisories in recent years.

The Upper Coosa Watershed Project has made considerable progress in addressing areas of concerns in the county. The Cherokee County Soil and Water Conservation District developed a cost-share program to assist landowners with installing Best Management Practices to reduce soil erosion, improve water quality, and better utilize forages for livestock. The Upper Coosa River Project received 91 applications as of September 30, 2005, with 64 of these applicants completing their contract for a total of $123,860. The applications that were completed served to conserve, protect, and improve the natural resources in the watershed including 4,500 acres of erosion and sediment control, 1,500 acres of grazing land and hayland management, and the construction of 3 structures for proper animal waste utilization. An additional $24,879.81 had been obligated to landowners for implementation of Best Management Practices but, due to circumstances beyond the District's control, these contracts were not completed and had to be cancelled resulting in an unobligated balance of $24,879.81.

At the beginning of this project in FY2000, approximately 25% of the cropland was planted using conservation tillage practices and the remaining 75% was still being planting using conventional tillage. During the 2005 crop year over 95% of all row crop grown in Cherokee County were planted using conservation tillage methods and practices. The Upper Coosa River Project allowed for conservation tillage incentive payments (cost-share) to be made to cooperators that were willing to convert from conventional to conservation tillage methods. The Upper Coosa River Project was aided by some additional funds from the NRCS through EQIP and the Alabama Agricultural and Conservation Development Commission Program that was administered by the Soil and Water Conservation District. The Cherokee County Soil and Water Conservation District, in agreement with ADEM, also used $9,860.00 to purchase a No-Till Grain Drill that can be used by landowners in the county to continue to increase the acreage of cropland and pastureland that has conservation tillage as a best management practice.

Conservation Tillage in the Upper Coosa Watershed

Another area that the Upper Coosa River Project addressed was continuous livestock grazing and access to water. Through an education program, producers were informed of the benefits of prescribed (rotational) grazing versus continuous grazing. This practice has enabled producers to better control the livestock grazing and access to water, thus reducing nutrient loading in certain areas of the pasture which improves water quality.

The Cherokee County Soil and Water Conservation District has worked very closely with ADEM, the Upper Coosa River Stakeholders Committee, the Cherokee County Chamber of Commerce, the Cherokee County Commission, the Cherokee County Health Department, the Coosa Valley RC&D Council, the Alabama Agricultural Extension System and other organizations to promote an awareness of water quality issues to the general public. Several articles related to water quality issues have been published in the local media as well as in the NPS Newsletter.

An education and outreach program was also established with participating agencies including the Cherokee County Soil and Water Conservation District, the NRCS Centre FO, the Alabama Cooperative Extension Service, the Cherokee County Board of Education, and several other clubs and organizations. The program, which can address children as well as adults, is used as an educational tool to discuss soil and water conservation. Currently, there are two methods in place for the outreach. These methods include the Soil and Water Stewardship Materials provided by the National Association of Conservation Districts and the District's EnviroScape educational display. Since the inception of the education and outreach program, the soil and water quality program has been presented to over 2,600 students and 80 adults in the county.

Another aspect of Education and Outreach is the Cherokee County Soil and Water Conservation District's partnering with Weiss Lake Improvement Association (WLIA) on improving the quality of Weiss Lake. Two of the major accomplishments are the "Renew Our River" Campaign and the Crappie Restocking Program.

School children are taught about nonpoint source pollution in the Coosa River Watershed.

The Cherokee County Soil and Water Conservation District also partnered with the Cherokee County Chamber of Commerce, the Cherokee County Water and Sewer Authority, and the Cherokee County Health Department to announce a homeowner education program that would explain nonpoint source pollution caused by failing septic systems. The goal was to decrease and prevent septic system pollutants from entering the Coosa River. At the end of the program, each homeowner (one per residence) was given a voucher worth $100.00 to be used to have their septic system inspected, repaired and/or pumped out by certified individuals. Originally, $10,000.00 was set aside to fund this project. A total of over 100 individuals attended the training and 84 vouchers were distributed during this education campaign. Of the 84 vouchers that were issued, 64 of the vouchers were redeemed for a total cost of $6,400.00.

The Cherokee County Soil and Water Conservation District also partnered with the Cherokee County Health Department, the Cherokee County Commission, and the Coosa Valley RC&D Council to participate in an education and outreach program called "Helping Hands 2005". This is a training program for septic tank installers, vendors, engineers, electricians, pump people, machinery operators, and others who are interested in both classroom and on-the-job training in the installation of an atypical septic system for indigent or poor households within the county, where the system they have is either failing or not properly installed. Wade Bobo, Cherokee County Health Department, selected the two sites (two families) for the project. The program will allow individuals to receive classroom training on new and improved septic systems and the proper installation and then will allow those same individuals to assist in actually installing an atypical system. The two residents that were selected had a septic system that had been leaking into drainage ditches because the systems were installed on land that does not perk well. The drip irrigation systems that were installed through this program will not only help the family in need and provide training for the installers, but will also help alleviate a health problem in the watershed. The Upper Coosa River Project contributed a total of $3,600.00 for the program.

In Fall 2004, the county received a completed Watershed Management Plan for the Upper Coosa River Basin that was developed by Shani Kruljac in cooperation with the Cherokee County SWCD and ADEM. This plan has been distributed to the Cherokee County Commission, the Chamber of Commerce, the Soil and Water Conservation District, stakeholders, and other interested parties. The plan will be useful in current and future efforts to conserve and preserve the natural resources located in the Upper Coosa River Basin.

Lower Cahaba Watershed Project

This project was initially intended to provide a cost-share program to help install BMPs on agricultural land to help reduce pollution from sediment and bacterial pollution. Since the project was originally submitted, agricultural activity in the Lower Cahaba changed. Where cattle once grazed on pastures throughout the watershed, cattle populations have been greatly reduced. As a result, when the program was announced in Bibb, Perry, and Dallas Counties, the Soil & Water Conservation Districts had difficulty in finding enough farmers and cattle growers to participate. The project was modified in 2002 to focus on other aspects of nonpoint source pollution and other methods for protecting the water resources of this area.

BMPs were established at six sites in two counties. The practices included:

- Livestock exclusion: Fencing cattle from a creek and installing an alternative water supply
- Forestry control practices to reduce sediment loads
- Critical area treatment for badly eroded areas
- Nutrient management
- Erosion control on an access road
- Pasture improvement and hayland planting to reduce sediment
- Purchase of no-til drills in Perry and Dallas Counties

In addition to funding provided through the 319 Program, State Cost Share funds were provided for water quality improvement practices through the SWCDs. These included fencing and livestock exclusion , gully control structures, lagoon closure, terraces, diversions, waterways, stream protection, dead animal composters, buffer strips, and forestry sediment reduction practices. Thirty-two State Cost Share practices were installed in Dallas County and 12 in Perry County. The no-til drill in Dallas County was used to plant 1,088 acres and was rented 43 times.

A portion of the 319 grant was used to provide a technician to the Perry County SWCD field office. The technician successfully completed training and was certified by Alabama Water Watch to do water quality monitoring and bacterial analysis. He has been involved with collecting and testing water samples in Dry Creek, Rice Creek, Wallace Creek, Old Town Creek, and Mill Creek. He also completed “in field” evaluations of areas near streams and within watersheds. He has compiled a database that characterizes the attributes of each watershed. These attributes include types of landuse, best management practices and worst management practices relating to cropland, forestland, and grazing land. He has assisted NRCS staff providing technical assistance to landowners within the Lower Cahaba River Basin. Technical assistance included meeting with landowners, presenting viable management options while incorporating BMPs, recording landowner decisions, developing conservation plans, and providing follow-up assistance during implementation of the plan.

Prior to implementation of this project, ADEM discovered through its monitoring program that fecal coliform levels in Dry Creek exceeded allowable limits. It was first thought that the source of this pollution was an area where cattle were pastured. However, the cattle did not have access to the stream and appropriate BMPs were in place. Upon further investigation, it was found that a low-income family was located near the stream and its domestic wastewater system was failing, with direct discharge from the septic tank to the stream. Under this phase of the project, assistance was provided to the homeowner in the way of a raised bed filter. The project included pumping out the old septic tank, installing a sump and pumping system to pump wastewater uphill to the raised bed, and installation of the raised bed. The County Environmentalist (local health department) was involved with the project, and, therefore, it is hoped that this project can be used as a demonstration site for other individuals who will need an alternative waste management system. Based on a survey of households within Perry and Bibb Counties that was conducted as a separate part of this project, it appears that the need for alternative systems may be great.

Watershed Management Plan Development

River Basin Management Plans

The Department has provided technical resources and oversight to complete the development of river basin management plans for the following Alabama waterways. The development of these river basin management plans encompasses 26,088 square miles/ 16,696,741 acres of Alabama waterways.

- Middle Coosa River Basin (03150109) — 2,584.94 sq. miles/1,654,373 acres
- Upper Coosa River/Weiss Lake (03150105) — 8,51.95 sq. miles/545,259 acres
- Tennessee Valley River Basins (06020001, 06030001, 06030002) (06030003, 06030005, 06030006) — 6,825.85 sq. miles/4,368,535 acres
- Cahaba River Basin (03150202) — 1,818.08 sq. miles/1,163,571 acres
- Black Warrior River (03160109, 03160110, 3160111) (03160112, 03160113) — 6,288.19 sq. miles/4,024,423 acres
- Coastal Alabama Basin (03160204, 03160205, 03170002, 03170003) (03170008, 03170009, 03140106, 03140107) — 3,695.51 sq. miles/2,365,315 acres
- Tallapoosa River Basin (03150108, 03150109, 03150110) — 4,023.86 sq. miles/2,575,265 acres

The Department is currently working with stakeholder groups on the development of river basin management plans for the following Alabama waterways. Once completed, these river basin management plans will encompass an additional 21,106 square miles / 13,508,058 acres of Alabama waterways.

- Alabama River Basin (03150201, 03150203, 03150204) — 4,747.42 sq. miles/3,038,361 acres
- Upper and Lower Tombigbee River Basins (03160103, 03160105, 03160106, 03160201) (03160202, 03160203, 03160107, 03160108) — 7,570 sq. miles/4,844,648 acres
- Lower Coosa River Basins (03150107) — 1,963.29 sq. miles/1,256,511 acres
- Conecuh, Sepulga, and Blackwater River Basins (3140104, 3140301, 3140304) (3140302, 3140305, 3140303) — 3,996.33 sq. miles/2,557,667 acres
- Chattahoochee/ Chipola River Basins (3130002, 3130003, 3130004, 3130012) — 2,829.5 sq. miles/1,810,871 acres

Sub-basin Management Plans

Due to recent changes in EPA's approach to holistic watershed management, and subsequent changes in EPA guidance, the Department has recently focused its resources on the development of basin management plans for smaller, sub-basin watersheds. The Department is working with stakeholders in the following Alabama watersheds to develop these sub-basin management plans. As per Section 319 workplans, these sub-basin watershed management plans are in various stages of completion but the work is on schedule. These plans will incorporate, as applicable, EPA's nine key elements (a-i) and will encompass 1,387,348 acres of Alabama waterways.

Black Warrior (82,734 Acres)

• Dry Creek (031601110203)	12,648.140 acres	Draft Status
• Thacker Creek (031601090202)	9,662.646 acres	Draft Status
• Long Branch (031601090303)	19,752.694 acres	Draft Status
• Black Branch (031601090602)	40,670.980 acres	

Coosa Basin (443,531 Acres)

• Middle Coosa		Draft Status
Towne Creek (03150106-040)	24,636 acres	
Big Cove Creek (03150106-030)	51,203 acres	
Greens Creek (03150106-130)	26,911 acres	
Dye Creek (03150106-200)	79,680 acres	
Upper Big Canoe Creek (03150106-100)	124,917 acres	
Upper Kelly Creek (03150106-300)	111,565 acres	
Easonville Creek (03150106-290)	24,619 acres	

Mobile Basin

• Wolf Bay	Draft Status
• Weeks Bay	Complete

Tallapoosa Basin (108,482 Acres—Sougahatchee Only)

• Lake Wedowee	Complete
• Sougahatchee Creek (031501100201, 031501100204, 031501100203)	Complete

Tennessee Basin (752,592 Acres)

• Cotaco Creek (060300020601, 060300020603)	72,733.242 acres
• Eight-Mile Creek (031601090106)	1,140.866 acres
• Cypress Creek (06060005-180/060605-200)	96,077 acres
• Short-Scarham Creek (060300010803)	75,672.56 acres
• South Sauty Creek (060300010601)	62,774.164 acres
• Town Creek (060300020604)	23,436 acres
• Mack Creek-Robinson Creek (060300021001)	35,445.632 acres
• Second Creek/First Creek (060300021202, 060300021203, 060300021204)	43,738.989 acres
• Paint Rock (06030002-100)	93,154 acres
• Guess Creek (060300020105)	21,818.536 acres
• Little Paint Rock (060300020203)	36,196.456 acres
• Cole Spring Branch (060300020201)	3,110.322 acres
• Brier Fork (060300020307, 060300020305)	39,103.584 acres
• Beaverdam Creek(06030002-180)	28,187.779 acres
• Upper Bear Creek (060300060103)	78,220.084 acres
• Middle Flint River (060300021003)	41,783.358 acres

Categories of NPS Pollution

Agriculture

Excess Runoff Project for CAAP Facilities

This project was initiated to_collect and analyze data to better describe and develop a common understanding of the term "excess runoff" as it applies to the regulation of Concentrated Aquatic Animal Production (CAAP) facilities in Alabama. In order to understand more about the frequency and volume of discharge from catfish production facilities and the relationship between daily rainfall and these events, data on daily rainfall and pond discharge are needed from several farms.

These data are being collected at five locations in the catfish-farming area of west-central Alabama and at two locations in Lee County in east Alabama. Data collection began in March 2005 and will continue for 12 months. In addition, historical rainfall data have been located for Auburn, Marion Junction, and Demopolis within the general area where rainfall and discharge data currently are being collected. The data on rainfall and discharge are being collected in Hale, Lee, and Perry Counties. Historical rainfall data have been located for gauging stations in Dallas, Hale, and Lee Counties. However, the results of the study should be applicable statewide.

The project lead has mentioned the need for a national definition of the term "excess runoff" in talks presented at recent scientific meetings including: Aquaculture America 2005, World Aquaculture 2005, Tilapia Dialogue, and the World Wildlife Fund. This Alabama Department of Environmental Management project was specifically referenced in each case and the project has been discussed with many researchers, aquaculture producers, and other stakeholders.

Hydro-Seeder Project

This project with the Tennessee Valley Resource Conservation and Development Council in cooperation with the County Commissions, the Soil and Water Conservation Districts, and the Natural Resources Conservation Service in north Alabama demonstrated how a relatively low cost hydro-seeder can be used for county road bank or farm critical area applications. This project is intended to demonstrate to local governments and other landusers that time, money, and soil can be saved by using this approach.

The hydroseeding process is not only effective but is also fairly simple. Approximately 650 gallons of water, a special paper based mulching material, seed, fertilizer, lime, and a tackifying agent to stick all this material together, is sprayed on steep slopes. The mixture literally sticks on the exposed soil until the seeds germinate and attach. The mulching material, lime, and fertilizer effectively provide the medium necessary for the germination and establishment of the grass cover.

Three hydro-seeder units were purchased in August 2003 after which a training workshop and demonstration was given for representatives from the Morgan County Commission, the Morgan County SWCD, the Cullman County Commission, the Cullman County SWCD, the Limestone County Commission, and the Limestone County NRCS. During September 2003, three demonstrations of the Hydro-seeder were given in Morgan and Cullman counties and six more demonstrations were given in Limestone, Jackson, and Morgan counties from March until June of 2004. The hydroseeder units are still in use today providing simple, effective erosion control in north Alabama.

Experimenting with the Hydro-seeder

Eight Weeks After Hydroseeding

Continuing Education For CAFOs

Managing an animal feeding operation (AFO) using best management practices means staying informed regarding current regulatory requirements and the latest technology, equipment, management, and disposal methods relating to waste and wastewater. All personnel involved in managing AFOs or concentrated animal feeding operations (CAFOs) need current information in order to make and manage plans that effectively safeguard groundwater and surface water quality and reduce odor. Continuing education training is one way to stay up to date.

Under Alabama Department of Environmental Management regulations, all managing owners/operators and onsite supervisors of proposed or existing registered CAFO facilities are required to attend annual continuing education training. Currently (July 2005), a minimum of twelve hours of initial training and six hours of annual refresher training are required for CAFO operators. Proof of continuing education session attendance is required to be submitted each year with the annual CAFO registration.

Typically, members of the Alabama Cooperative Extension System and Natural Resources Conservation Service Waste Management Education Team, in cooperation with ADEM, the Soil & Water Conservation Districts, and the Alabama Department of Agriculture and Industries, present AFO/CAFO Continuing Education Training. The Alabama Farmers Federation, the Alabama Poultry and Egg Association and other interested organizations cosponsor some of this training.

Construction

Erosion and Sediment Control on Construction Sites and Urban Areas in Alabama

This project with the Soil and Water Conservation Society-Alabama Chapter has been used to foster four activities: (1) erosion and sediment control field days; (2) additional distribution of the Field Guide for Erosion and Sediment Control on Construction Sites in Alabama; (3) revise and distribute the Alabama Handbook for Erosion and Sediment Control and Stormwater Management on Construction Sites in Alabama and (4) provide erosion and sediment control training. The Chapter has an agreement with Earl L. Norton, CPESC, to coordinate the program.

Various examples of erosion control blankets were installed to demonstrate to participants at the Red Water Blues Field Days.

"Red Water Blues" Field Days were held in Decatur, Prattville, and Enterprise between September 15 and September 29, 2005. The purpose of the Field Days is to provide an opportunity for those interested in the installation methods/products associated with erosion and sediment control practices to see field applications and to have an opportunity to visit on-site with subject experts. Approximately 190 participants attended the field days. Also, preparations were made for an additional field day to be held in the Mobile area during October 2005.

The Field Guide for Erosion and Sediment Control on Construction Sites in Alabama was developed during the summer of 2004 to provide construction and maintenance information for the commonly installed BMPs in a format that is easily carried to the field by contractors and inspectors. Copies of the field guide were provided to all 2005 field day participants. Seven thousand copies of the guide have been printed and approximately 4,000 of these were distributed during the April-September, 2005 period.

Red Water Blues Field Day in Prattville.

The Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas was distributed during the period April-September 2005 through the Jefferson County Soil and Water Conservation Foundation. Distribution of the Handbook and CDs is made at cost through an arrangement between the Foundation and the Alabama Chapter of the Soil and Water Conservation Society. An electronic version of the Handbook is also available on the State Committee homepage for use by the public. Approximately 825 copies of the Handbook have been distributed since it was updated in 2003.

The training module developed under an earlier contract was updated and presented in August 2005 in Mobile, Montgomery, Huntsville, and Birmingham, through the Alabama Technology Transfer Center of Auburn University. Approximately 250 participants, primarily site designers and conservation contractors, attended the training events.

Urban

NEMO II

This past year Alabama's Nonpoint Source Education for Municipal Officials (NEMO) Project was taken to a new level with the introduction of a second tier of training focusing on Growth Readiness. In November 2005, the Birmingham Regional Planning Commission partnered with the Southeast Watershed Forum to present the first NEMO II Growth Readiness workshop. The workshop was attended by NEMO trainers in order to train them in presenting the concept of Green Design to decision makers in their communities. As a result of the workshop, additional Growth Readiness workshops were planned by attendees for their communities.

On September 26, 2005, the Regional Planning Commission of Greater Birmingham, in partnership with Cawaco Resource Conservation & Development Council, hosted a Growth Readiness Workshop held in conjunction with the Corridor X and Northern Beltline stakeholder groups. Topics for the workshop included asset based planning, a case study in low impact development, conservation based ordinances, alternative wastewater treatment systems, and green-friendly land clearing. The workshop was well attended with 49 participants.

The South Alabama Regional Planning Commission (SARPC) received a grant from ADEM 604(b) to conduct education and outreach for municipal officials in cities in Mobile and Baldwin Counties. After attending the NEMO II: Growth Readiness and Economics Workshop in November, smaller NEMO II working groups were formed and began to meet monthly. SARPC was able to give technical assistance with planning issues, subdivision regulations, and environmental problems. This technical assistance gave SARPC the opportunity to speak to member governments about water quality information.

At the 2005 SARPC Strategic Work Session, staff covered topics of water quality and watershed management during the round table sessions. The SARPC staff created an interactive quiz to facilitate discussion and education during each roundtable discussion. The SARPC staff were available throughout the work session and followed up with visits to the member governments. As a direct result of this grant, the SARPC staff facilitated the development and adoption of a land ordinance for the City of Bayou La Batre.

Participants at the Growth Readiness Workshop in Birmingham discuss their case study.

Forestry

Forestry BMP Report

Alabama forestland covers 22.9 million acres, which is the second largest in the nation, and represents an increase of one million acres since 1990. Private landowners own 78 percent of this commercial forestland which is composed of 46% hardwood, 35% pine and 19% mixed pine and hardwood. Alabama's forests are growing more trees than ever recorded, supporting 50,000 people who are employed directly with forest-based companies and another 70,000 people who are employed indirectly with the forest industry. Overall, forest industry employs about 15% of Alabama's workforce, either directly or indirectly.[1]

ADEM has in place a Memorandum of Understanding with the Alabama Forestry Commission (AFC) and the U.S. Forest Service (USDA-USFS) in order to effectively address citizen's water quality complaints related to silvicultural practices, enhance program and planning strategies, and coordinate and implement best management practices that protect water quality. The Department's Field Operations Division staff and the Alabama Forestry Commission staff work cooperatively to promote forestry (silviculture) BMP implementation, conduct compliance assistance for forestry operators, perform routine evaluations of forestry activities statewide, respond to citizen complaints in a timely manner, and achieve voluntary implementation of BMPs where possible. The Department insures implementation of BMPs through compliance assurance activities, as necessary. In addition, Field Operations Division staff independently perform compliance inspections of forestry operations and initiate appropriate compliance activities as needed in order to ensure that effective forestry BMPs are implemented and maintained.

[1]Alabama Forestry Commission 2004 Annual Report

Hydromodification

Restoration and Management of Rivers and Watersheds – Applied Fluvial Geomorphology

This project is designed to provide advanced training in watershed management, stream restoration, and riparian system enhancements at coastal and inland locations around Alabama. Several introductory and advanced workshops have been held to meet the requirements of this proposal. Each workshop features classroom and field work that introduces basic concepts of fluvial geomorphology and classification systems such as the Rosgen Stream Classification System. Key partnerships include the Alabama Clean Water Partnership (Basin and Statewide), the Mobile Bay National Estuary Program, the Auburn University Marine Extension and Research Center, and North Carolina State University.

Participants review procedures for finding bankfull/criteria at a stream restoration workshop.

Introductory and advanced stream workshops, stormwater workshops, and a basic watershed science workshop have been held throughout the state in Auburn, Birmingham, and Montgomery. Workshops include the Stormwater BMP Academy (March 8-9 2005), Design for Stream Restoration (May 11-13, 2005), and Green Building (November 2004). An introductory stream restoration workshop was also held in Montgomery on October 18 and 19. Additional stream restoration workshops will be held as requested by communities and to follow on the ground projects. Examples of future workshops may include Stream Restoration Construction and Stream Bioassessments Using Macroinvertebrates.

Each workshop participant received a resource notebook with copies of presentations, pertinent scientific papers, speaker and sponsor contact information, web resources, and other items of use. A web page has been created to house information compiled at these workshops as well as to announce future workshops and initiatives. This web site is located at the following address: http://www.aces.edu/waterquality/streams/general.htm.

North Gadsden Creek before restoration.

North Gadsden Creek after restoration.

Etowah County Stream Restoration Projects

Two successful stream restoration projects have been completed as of October 2005 using Rosgen's Natural Channel Design Techniques in Etowah County. These projects were high priorities of the Middle Coosa Watershed Project. The first stream is a rural stream that is located on the Waldrop Farm and is up-river from the Gadsden Water Works' intake. Slightly up-river is the second stream site that has been identified as an urban stream and is located in the North Gadsden Park. The streams are relatively close in proximity to each other which will make great comparison demonstration projects.

Pre-monitoring before stream work began.

The Middle Coosa Watershed coordinator worked closely with ADEM, ACES, NRCS, and local landowners to implement the rural stream restoration project on Waldrop Farm. The stream was previously channelized and was being used as a watering source for livestock. Over time, this had caused the stream banks to erode and allowed sediment and other nonpoint source pollutants to enter the stream. The purpose of this project was to restore the channelized stream to a natural state and improve the water quality. The stream went from 400 feet of a straightened stream to 650 feet of a meandering stream. To control the erosion of sediment after the construction phase, several erosion control products were used.

The urban steam proved to be a successful project as well. This stream is located in North Gadsden Park which is currently under renovation. In addition to putting meanders into the stream which will eventually provide better habitat, the stream's aesthetic value has also increased. Partners in this project include, but are not limited to, the City of Gadsden, ADEM, ACES, and Gadsden State Community College. Before work began on these projects, ADEM performed biological, chemical, and habitat assessments on both of the streams so that water quality improvements can be measured after these projects have been completed.

Creek on Waldrop Farm before restoration.

Creek on Waldrop Farm after restoration.

Land Disposal

Survey of Onsite Domestic Wastewater Systems

Bibb and Perry Counties are two of a number of counties in central and south central Alabama that make up the "Black Belt", a region known for its dark, rich soil, as well as its minority population, rural nature, and poverty. Soils in this region of Alabama (and extending eastward and westward into Georgia and Mississippi) are described as clays, are often termed "prairie" soils, and are characterized by low hydraulic conductivities. These clay soil properties are problematic for onsite wastewater dispersal systems, and in many cases are not recommended for traditional in-ground dispersal trenches.

The extent of the onsite wastewater management problem was largely unknown in these poor, rural counties. The Alabama Department of Public Health relies on individual homeowners to obtain the proper onsite wastewater permits and to report malfunctions. However, because of the lack of resources, the number of households in these rural areas that have no onsite wastewater management system or have a failing onsite system is unknown. The lack of onsite wastewater management is thought to be a significant contributor to nonpoint source pollution (oxygen demanding materials, nitrogen, phosphorous, fecal coliforms, etc.), but data on the number of failing systems and their impact on surface and/or groundwater quality was lacking.

This data-collection effort was designed to survey the residential households and small commercial establishments in two Black Belt Counties to determine the number of onsite wastewater systems and the extent of the onsite wastewater failures. Specifically, the survey was able to:

- Identify and GPS locate (lat/long) residences in Bibb and Perry Counties **not** serviced by sewer.
- Identify and GPS locate (lat/long) the extent/boundaries of existing sewer in each county
- Determine for each residence not on sewer...
  - Address
  - Number of bedrooms in the dwelling
  - Number of household occupants (to estimate wastewater generation rate)
  - Existence of a straight pipe (surface discharge of raw wastewater)
  - Existence (yes/no) of a septic tank (and its size and age)
  - Existence (yes/no) of dispersal trenches (length and age)
  - Evidence of failure (sewage on the surface)
  - Any known past septic tank/field line failures and/or repairs

After obtaining equipment and preparing procedures for documentation, the survey of residences (outside of sewered areas) for onsite wastewater systems and their operational status was begun. More than 2,000 homes in Bibb and Perry Counties were surveyed door-to-door. Information was gathered on dwelling address (and GPS coordinates), dwelling size (number of bedrooms or occupants), the presence or absence of a septic tank and/or drainfield, and indications of system failure (sewage on the surface).

Results indicate that:

1. about 14% of the residences surveyed have no septic tank,
2. about 34% of residences with a septic tank are failing,
3. about 48% of residences have either no system or a failing system.

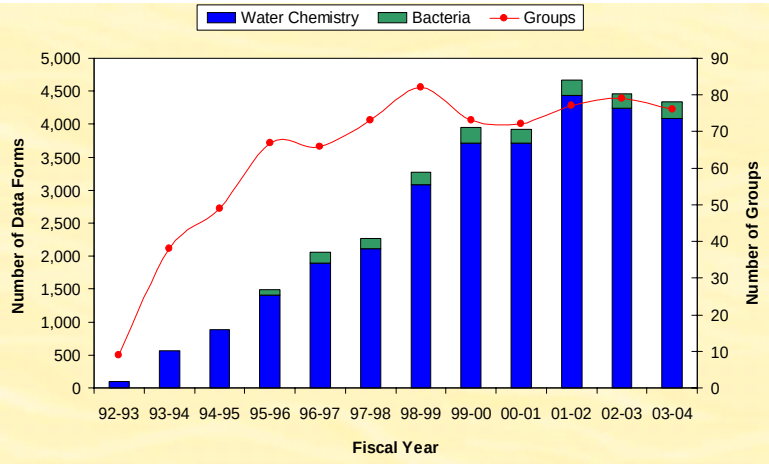
As expected, the findings indicate that some difficult factors are in place that exacerbate the job of improving water quality in this region of the state:

- Soils in a band that runs across the middle of Alabama, known as Black Belt Soils, have very low percolation rates and are highly unsuitable for septic tanks and field lines.
- A large number of poor, minority families are located in this region and can ill afford the cost of conventional onsite systems, much less alternative systems.
- Onsite systems failing at these alarming rates will have an adverse impact on water quality.

Education, Outreach, and Technology Transfer

Alabama Water Watch

Alabama Water Watch (AWW) is a statewide program dedicated to developing citizen volunteer monitoring of Alabama's lakes, streams, and coastal waters. From October 1, 2004 through September 30, 2005, AWW conducted 92 training sessions that were attended by 487 people; 76% were conducted by or with a Citizen Trainer. Twenty-six Water Chemistry Workshops (292 people), 42 Recertification Sessions (148 people), 14 Bacteriological Workshops (134 people) and five Stream Biomonitoring Workshops (50 people) were conducted during the report period. Four Training-of-Trainer sessions were conducted during this period: one for Water Chemistry (14 people), one for QA Officer (21 people), one for Trainer Refresher (7 people) and one Internship for two Water Chemistry Trainers.



Sixty-seven citizen groups submitted data from nine of Alabama's ten major watersheds. Most AWW groups monitored in the Tallapoosa, Tennessee, Warrior and Coosa watersheds (13, 12 and 11 groups, respectively). Eleven groups (16% of total) were formed by teachers and their students. Nine percent of the groups sampled on the coast, while 19% sampled on lakes and 72% on streams across Alabama. A total of 3,729 chemistry records and 737 bacteriological data records were submitted. The most active groups were in the Tennessee (13 groups and 24% of data received) and Coastal Plains Streams watersheds (4 groups and 23% of data received) followed by the Warrior (12 groups and 15% of data) and Tallapoosa (13 groups and 13% of data) watersheds. Since 1993, AWW has received over 34,000 water chemistry records and 7,000 bacteriological data records. More than 1,800 sites have been monitored on 600 waterbodies across Alabama.

Three Data Interpretation Sessions, comparing AWW citizen data with ADEM and AU data, were conducted for Smith Lake, Dog River Clearwater Revival and Neely Henry Lake groups. Numerous Outreach meetings were attended to promote AWW activities. AWW responded to several official requests for data from other organizations such as ADEM, TAI Scientists, CH2M HILL, and Kent State University. AWW staff attended two Alabama Water Watch Association Meetings, one Alabama Clean Water Partnership Meeting, several AWW monitoring group meetings, like the Annual Meetings of Lake Watch of Lake Martin, the Dog River Clearwater Revival, the regular meetings for Save Our Saugahatchee, and Friends of Chewacla-Uphapee Watershed. AWW personnel attended Conferences and Seminars including "*Building Environmental Monitoring Programs for Validity, Impact and Sustainability" in* Virginia and the 16th Annual Nonpoint Source Conference in Alabama. Approximately 100 people attended the Annual Meeting held at Camp ASCCA on June 5, 2004, hosted by Lake Watch of Lake Martin.

Program accomplishments and initiatives included the revision, updating, and printing of the AWW Bacteriological Monitoring Manual and printing of the new version of an AWW Waterbody Report for Lake Mitchell and Smith Lake. AWW personnel coordinated the Saugahatchee Creek Watershed Management Plan (SWaMP) after the initial 319-grant for the project expired, and edited a 20-page booklet entitled *Saugahatchee Creek Watershed...Past, Present, Future*. The AWW website and the Water Data Section have been extensively updated, and visited over 78,000 times and 14,000 times respectively, and 80% of AWW data received during the report period were entered online. During World Monitoring Day (October 18th), about 170 monitors submitted more than 400 water data records from 254 sites in Alabama.

Broad-scale Communication and Forecasting for Environmental Quality

This project provided for the development of an interactive website with watershed protection information (e.g., satellite imagery/flyovers, environmental data and information, watershed status/health, pollution prevention tips and solutions, etc.) to be used as a communications mechanism to relate the connection between the weather, the environment, and watershed protection, to the citizens of Alabama. In addition to water quality protection issues, real-time ozone animations, next-day Air Quality Index forecasts, and real-time particulate pollution monitoring and forecasts provide environmental quality data in a format that the general public can easily identify and understand.

On November 15th 2004 WSFA debuted its new "Commitment to Clean Water" Website and on November 17th 2004 WKRG debuted its new " Watersheds: The Coastal Connection" website. All these elements were completed prior to the program debuts. Prior to the kickoff of the sites StormCenter Communications created a Users Guide for the stations to use in presenting the website content and other information to their audiences.

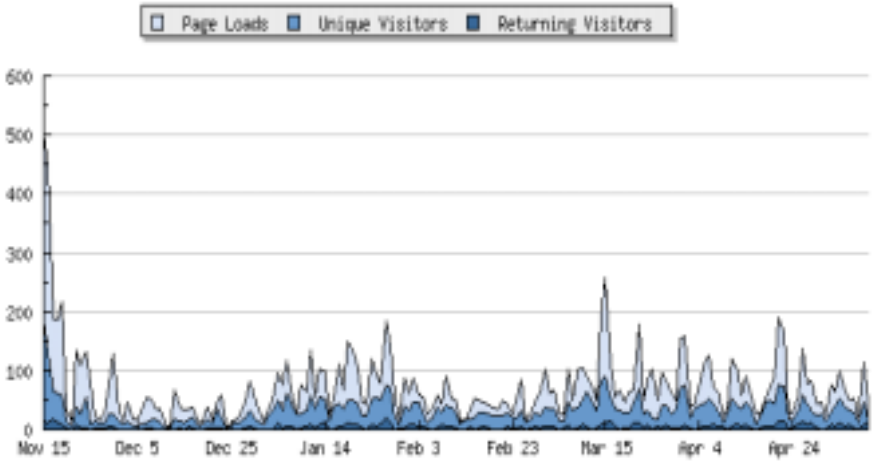
A major element in the programs success was in the organization of Content Provider Networks in both Montgomery and Mobile. They have provided a constant flow of calendar events and story ideas.

In addition, Dave Jones and Ed Gross, along with Rich Thomas of WSFA, participated in the 16th Annual Alabama 2005 Nonpoint Source Pollution Conference in Montgomery and presented the watershed project as the luncheon presentation.

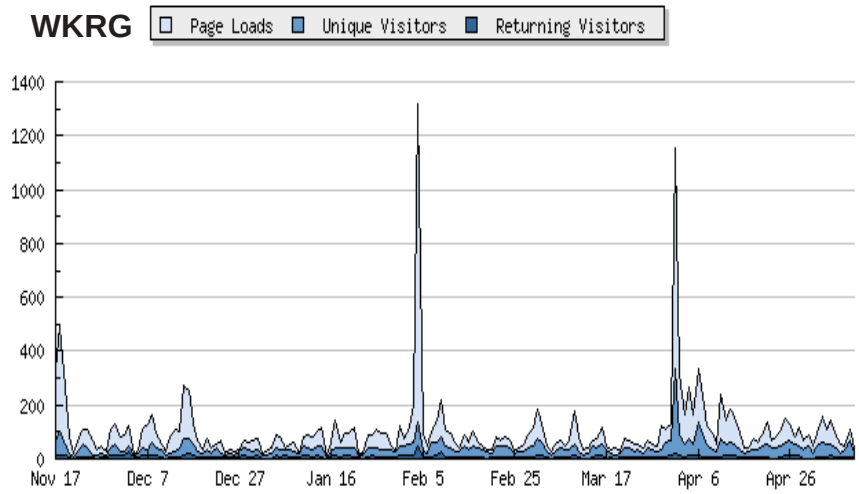
WSFA

WKRG

WSFA



WKRG



Teach-the-Teacher Workshops - Promoting Conservation Education

ADEM provided funding for the district administrative coordinators (DACs) of the Natural Resource Conservation Service to receive training in conservation education. This two and a half day training was conducted in Selma, and was a cooperative effort between ADEM, the Alabama Association of Conservation Districts, the State Soil and Water Conservation Committee (SWCC), and Dr. Doug Phillips of Discovering Alabama.

The DAC of Madison County has conducted teach-the-teacher workshops over the past 5 years in Madison County and ADEM saw this as an opportunity to expand this effort throughout the state. Protection of watersheds, soils, and many hands-on activities were taught to the DACs with the goal of educating teachers to enable them to bring these activities back to their classrooms and promote conservation education in their schools.

As a result of this workshop, DAC's in Lawrence, Elmore, Shelby, Lee, Dale, and Conecuh Counties conducted workshops to teach elementary and high school teachers about various aspects of conservation and environmental protection. More than 75 teachers went through the training and received continuing education credits.

The SWCC hopes to expand the Teach-the-Teacher program to other districts next year.

Kathy Walker - DAC of Madison County

DAC Workshop - Old Cahawba Tour

STEPL and Region 5 Models and Load Reduction Training

The Nonpoint Source Program is responsible for the implementation of Alabama's efforts under Section 319 of the federal Clean Water Act. The program coordinates with various stakeholders throughout Alabama on the development, and implementation, of watershed management plans, the installation of on-the-ground Best Management Practices, and the education of local citizens to address water quality issues associated with nonpoint source pollution.

EPA, and thus ADEM, has established nine key components that must be addressed in the implementation of watershed management plans. One of these nine key components is the calculation of load reduction estimates, which outlines the reductions in nitrogen, phosphorus, sediment, and organic compounds that could be achieved with the effective implementation of the watershed management plan. The reduction of these pollutant loadings will result in water quality improvements and the removal of waterbodies from Alabama's 303(d) List of Impaired Waters.

The calculation of these load reduction estimates can be accomplished by using a variety of computer models including the Spreadsheet Tool for Estimating Pollutant Load (STEPL) Model and the Region 5 Model. Due to the fact that Tetra Tech, Incorporated (Tetra Tech), under the direction of EPA, developed the STEPL Model and has also played a key role in the development of the current Region 5 Model, ADEM requested assistance from Tetra Tech in delivering the STEPL and Region 5 Modeling and Load Reduction Training to a number of its stakeholders.

This training, that was provided to the ADEM staff as well as various stakeholders that have shown a vested interest in the development of watershed management plans and water quality improvements, was held on August 16, 2005 at the Auburn University of Montgomery TechnaCenter. There were a total of 34 individuals, throughout the state, who attended this training which was a necessary and vital component in ADEM's efforts to ensure the development and implementation of watershed management plans.

Alabama Envirothon

On April 28-30, 2005, the Alabama Envirothon, which is an annual outdoor environmental education competition for high school students, was held at Camp ASCCA near Jackson's Gap, Alabama. During this three day event, participating teams completed training and testing in five natural resource activities which included soils and land use, aquatic ecology, forestry, wildlife, and a current environmental issue. This year's complex issue was entitled "Managing Cultural Landscapes." On the first day participants receive special training in each of the above areas. On the second day teams undergo testing and on the final day teams perform presentations before a panel of judges who are knowledgeable in environmental issues. Nine teams from the state took part in this year's competition with Oak Mountain High School of Shelby County being the overall event winner. They advanced to the Canon Envirothon in Springfield, Missouri to compete for recognition and scholarships. Belgreen High School and Hanceville High School Team 1 finished second and third, respectively.

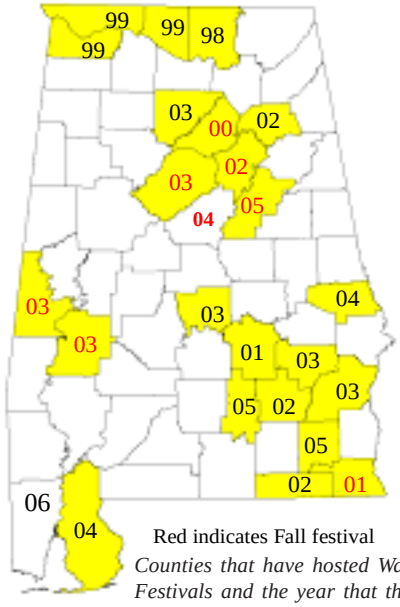
Students participate in water quality activities at the State Envirothon Competition in 2005.

The Alabama Department of Environmental Management , in a joint effort with other agencies, continued to play a supporting role in this competition by helping in event planning, developing test materials, leading many of the training events, judging, and overall program implementation. In addition, local Soil and Water Conservation Districts and RC&D Councils played an important role by providing training, support, and funding for the event.

Alabama Groundwater Festivals

Approximately 50 percent of Alabamians rely on groundwater as their primary source of drinking water. Groundwater is also a source of recharge to wetlands and other surface water bodies. However, there is not a high level of knowledge and understanding of groundwater by the general public. One result of this lack of education is an increased threat to our groundwater resources from surface sources of contamination. Decreases in groundwater quality can be attributed to the misuse of lawn fertilizers and pesticides, spills and discharge of hazardous materials on the ground, improper maintenance of septic tanks, underground storage tanks, and improper land development practices.

A key to providing protection for our groundwater resources is education. Due to the nature of groundwater, which is below the surface and "out of site", one of the best ways to educate children is to give them an opportunity to observe groundwater by creating their own models. Nonpoint source pollution and its relationship to groundwater has been demonstrated through several activities at the Groundwater Festivals. The goal of a groundwater festival is to educate children, and indirectly their parents, on groundwater issues including what it is, how it is used, and its susceptibility to contamination. The Groundwater Festival is a hands-on festival that is a culmination of classroom study. Children have the opportunity to experience first hand through experimentation and problem solving, the complexity of groundwater and its relationship to nature in general.



Red indicates Fall festival

Counties that have hosted Water Festivals and the year that their first festival was held

The first Groundwater Festival in Alabama was conducted on March 20, 1998, in Madison County. The Madison County Festival was a pilot study to determine the impact, interest, and long term prospect of hosting groundwater festivals in Alabama. Since this first festival proved to be a great success, 21 counties around the state have hosted water festivals to date. Approximately 40,000 students have participated in these festivals from 1997 to 2004. Three additional counties hosted a festival in 2005, and Mobile and Tuskeegee plan to host a festival in 2006.

2005 Nonpoint Source Conference Enhances Environmental Awareness

Montgomery's Embassy Suites was the site of the 16th Annual Alabama Nonpoint Source Conference, hosted by ADEM's Office of Communication, Planning and Outreach. This conference provided attendees with important information on water quality in Alabama's rivers, lakes, and streams, updates on nonpoint source demonstration projects, changes in Alabama's water quality reporting requirements, and national perspectives on the future of nonpoint source funding.

Montgomery's WSFA-TV Channel 12 Chief Meteorologist, Rich Thomas, discusses the positive influence that media partnerships play in increasing environmental awareness.

The keynote speaker for the conference was Ms. Robbi Savage, Executive Director of the Association of State & Interstate Water Pollution Control Administrators (ASWIPCA). Ms. Savage discussed the effects of past and future congressional budget cuts on state nonpoint source programs. Ms. Christine Olsenius, Executive Director of the Southeast Watershed Forum, discussed the recent changes in land use activities in the southeastern states and emphasized the importance of building partnerships to encourage watershed protection. Additional conference presentations included the environmental benefits achievable using environmental management systems (EMS), using computer models to calculate nutrient loading, establishing business partners for clean water, streambank stabilization/restoration, and using broadcast meteorologists to provide important environmental information.

More than 200 individuals, representing a diverse group of professions, organizations, and industries, attended the conference. Attendees included environmental engineers, biologists, geologists, municipal leaders, water quality specialists, and environmentalists.

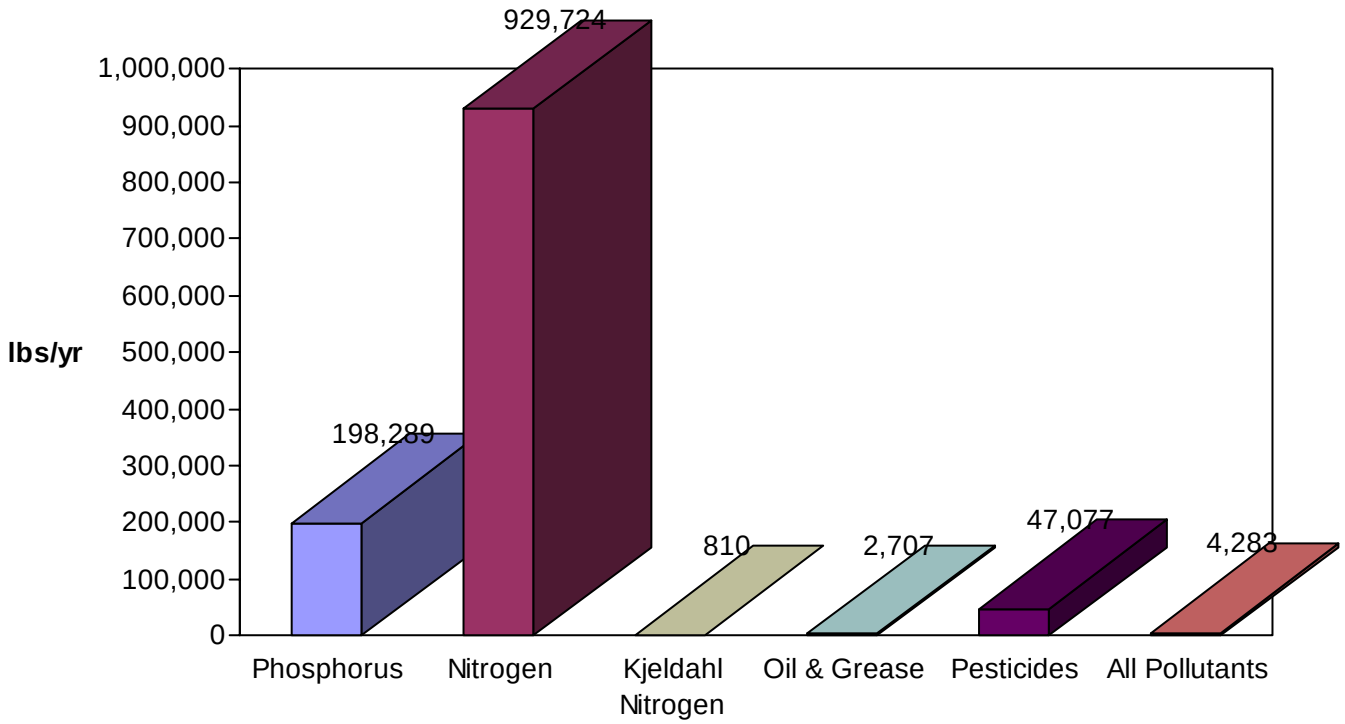
"Take Action for Clean Water" Public Service Announcements

The Department has initiated a series of public service announcements entitled "Take Action For Clean Water." These public service announcements focus on the causes and effects of nonpoint source pollution and encourage Alabama citizens to take steps to alter/reduce/eliminate their daily activities that contribute to nonpoint source pollution. The public service announcements have been aired on television and radio stations throughout Alabama. The Department has worked through the Alabama Broadcasters Association to assist in the distribution of the public service announcements and is taking advantage of a special program that they offer to government agencies that allows the Department to leverage its funding and receive $3 worth of airtime for each $1 invested in the program. Although EPA grant funding is not being utilized to fund this project, it is an effort that has been undertaken by our staff and it is directly related to educating citizens on reducing nonpoint source pollution.

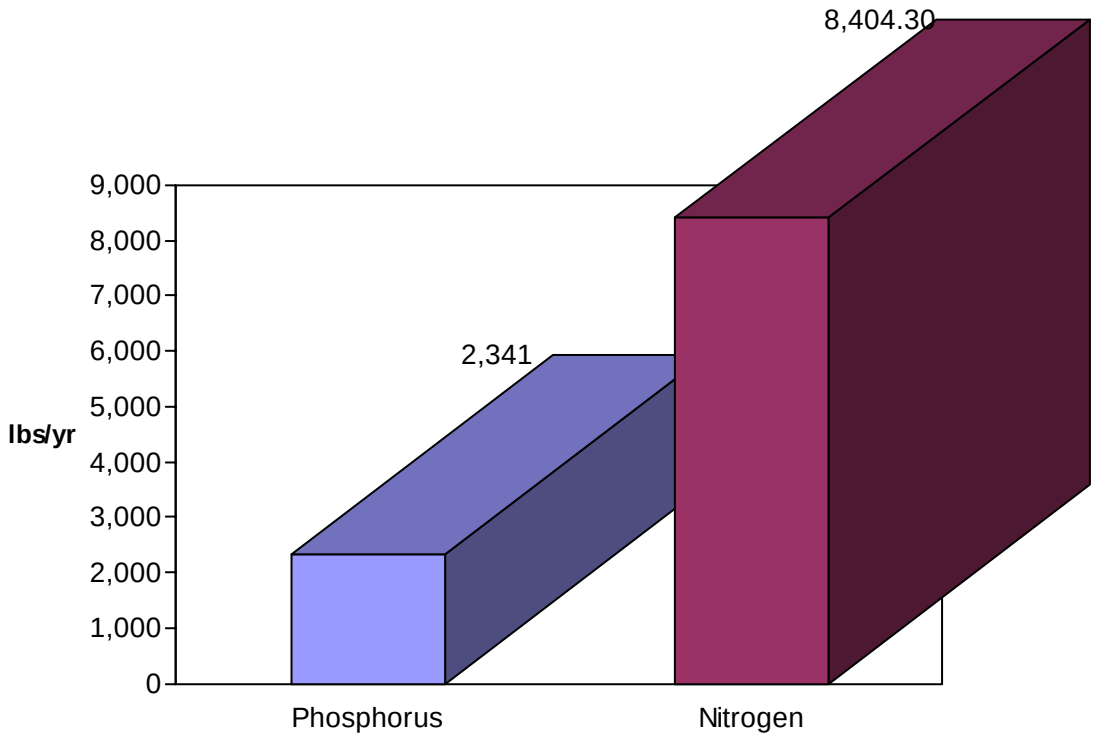
Pollutant Load Reductions & NPS Goals

Pollutant Load Reductions

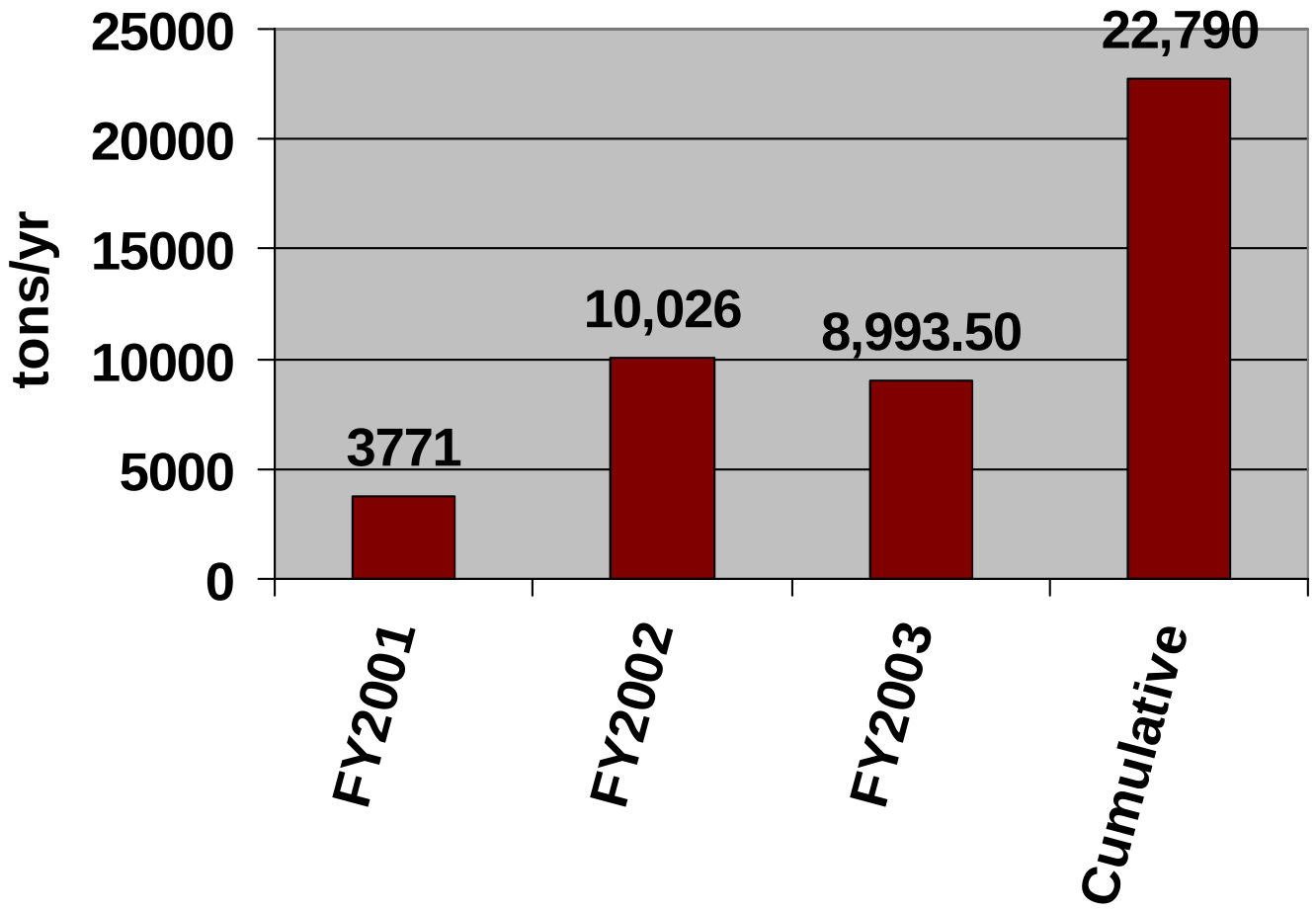
Reported Pollutant Load Reductions from FY2002 Projects (from GRTS)



Reported Pollutant Load Reductions from FY2003 Projects (from GRTS)



Reported Sediment Load Reduction FY2001-FY2003 (from GRTS)



NPS Program Goals

Goal 1: *Collect reliable water quality data and information in order to ascertain the extent, degree, and potential for NPS pollution to surface and groundwaters* (Endpoint: 2015)

- ADEM finalized the 5-year rotational Tennessee River Basin NPS Assessment with the final report available to the public in Nov. 2005.
- ADEM continued to finalize data for the 5-year rotational Southeast Alabama Coastal River Basin NPS Assessment Report.
- ADEM continued to assess data from the 5-year rotational Coosa, Tallapoosa, and Alabama River Basin NPS Assessment.
- ADEM implemented a coordinated statewide point source and NPS water quality monitoring and assessment program involving staff of the Water Division, Field Operations Division, and the Permits and Services Division - Nonpoint Source Unit to target statewide priorities, better utilize limited funding and staff resources, minimize duplication of effort, and accelerate environmental data collection, analyses, and reporting. Annual water quality monitoring priorities have been identified and a monitoring plan developed.
- ADEM continued to collect and analyze water quality data from reservoir monitoring (Section 314: Clean Lakes Program) to address nutrient criteria.
- ADEM continued to coordinate fish collection activities with other state and federal agencies, so the Alabama Department of Public Health can ascertain the need to issue fish consumption warnings or advisories to protect public health.
- Continued to populate STORET and Dept-wide databases with NPS water quality data.
- Updated the nonpoint source component of the Integrated Water Quality Monitoring and Assessment Report.
- Continued to collect NPS water quality data according to the EPA-approved ADEM Quality Assurance Management Plan.

Goal 2: *Integrate the Alabama NPS Source Management Program and CWA Section 319 grant funding, with development and implementation of Total Maximum Daily Loads (TMDLs*). (Endpoint: 2015)

- The Section 319 incremental grant funding continued to target Section 303(d) listed waterbodies for the development and implementation of watershed management plans. The watershed management plans are designed to address Section 319 grant guideline "a-i" watershed plan elements.
- The Water Division completed development of 1996 listed TMDLs to meet the 1998 EPA-consent order timeline.
- The ADEM NPS Unit and Water Division are finalizing a list of watersheds that could be de-listed in-part due to Section 319 project activities.
- In October 2005, a final watershed management plan designed to achieve Section 319 grant guideline elements was developed based on a TMDL for the Saugahatchee Creek Watershed. ADEM is coordinating with stakeholders for Section 319-funded best management practice funding.
- In 2005, cooperative agreements were executed to implement best management practices in Yellow Bank Creek, Goose Creek, Thacker Creek, Long Branch Creek, Crowdabout Creek, Black Creek, and Harris Creek watersheds. All of these Section 303(d) listed waters have TMDLs developed.
- In August 2005, Section 319 was used to sponsor a statewide NPS pollutant load reduction model training course for NPS Unit staff and watershed stakeholders. The training was also attended by TMDL development staff, as well as EPA staff.
- The ADEM Water Division continued to use Section 319 funding to contract outside the agency to develop NPS TMDLs. Approximately $550,000 of Section 319 base grant funding has been set-aside to help the agency develop NPS TMDLs.

Goal 3: *Coordinate and leverage federal, state, and local funding and other resources to design, install, or maintain appropriate NPS management practices needed to attain water quality standards.* (*Endpoint: 2015)*

- In 2005, Section 319 cooperative agreements were executed to implement several best management practices in Yellow Bank Creek, Goose Creek, Thacker Creek, Long Branch Creek, Crowdabout Creek, Black Creek, and Harris Creek watersheds. All these Section 303(d) listed waters have NPS TMDLs developed.

- ADEM continued to partner in a Memorandum of Agreement with the Alabama Forestry Commission to assure silviculture BMPs are adequate, citizen complaints are resolved, and enforcement actions taken, if needed.

- ADEM continued to partner in a nationally recognized cooperative agreement (consent order) with the Alabama Department of Transportation to implement statewide BMPs in conjunction with road building activities.

- ADEM continued to participate on the NRCS State Technical Committee for Farm Bill cost-share program targeting and BMP technical standards and guidelines development.

- ADEM continued to partner with the SWCC in maintaining a statewide CAFO notice of registration tracking database. This database is "shared" by state and federal agricultural agencies to track animal feeding operations and waste management plan development status. ADEM continued to partner with the Alabama Cooperative Extension System to disseminate information needed to meet or exceed AFO/CAFO rules through the ACES website. ADEM continued to partner with the NRCS concerning land application of litter including technical standards and guidelines related to animal waste and nutrient standards. ADEM also worked with the Alabama Department of Agriculture and Industries on the implementation of the Certified Animal Waste Vendor Program. In addition, ADEM partnered with the Alabama Animal Waste Management Team at Auburn University to address environmental regulations, agricultural economics, crop and soil science, water quality, and agricultural pollution prevention issues.

- ADEM continued to partner with ACES, NRCS, and the National Weather Service to assist farmers with implementation of applicable regulatory BMP requirements by providing a FORECAST and FARMERS Map website for land application of litter in order to meet or exceed NRCS technical standards and guidelines and to comply with applicable ADEM requirements.

- Continued to leverage interagency funding by supporting statewide NPS agricultural water quality and statewide erosion and sedimentation coordinator positions with the Alabama Soil and Water Conservation.

- The ADEM NPS Unit continued to partner with the Alabama Clean Water Partnership in identifying and leveraging match for Section 319 grants as well as providing funds for river basin/watershed projects.

- The ADEM NPS Unit continued to support technology transfer, technical assistance, and education/outreach for statewide hydrologic/habitat modification projects (Alabama Stream Team).

- The ADEM NPS Unit continued to promote the NEMO program in Alabama including attending the national meeting and participating in statewide meetings and presentations.

- Continued to partner with several NPS cooperators to present Stormwater Management and Erosion and Sediment Control Workshops, Growth Readiness Workshop (Sept. 2005), Roadway Construction Stormwater Management and Erosion & Sediment Control Workshop (Dec 2005), and coastal Alabama Stream and Restoration Conferences (Aug and Sept. 2005) to address several NPS categories.

Goal 4: *Develop 10 river basin management plans (8-digit Hydrologic Unit Code Cataloging Unit) that present practical "big-picture" goals, objectives, and milestones to protect impaired or threatened waters. (*Endpoint: 2015)

- As of 2005, the following river basin management plans have been developed:
  - Tennessee
  - Cahaba
  - Mobile River (Coastal)
  - Black Warrior River (including Locust Fork, Mulberry Fork, and Five Mile Creek)
  - Alabama

- Tombigbee
- Tallapoosa
- Coosa (including Upper, Middle, and Lower)

- The final copy of the Choctawhatchee, Pea, and Yellow River Basin Management Plan will be available to stakeholders 2006.

- Final copies of the Conecuh- Sepulga River Basin Plan will be available to stakeholders 2006.

- ADEM executed a Section 319 funded cooperative agreement in 2005 to the Alabama Clean Water Partnership to develop a Chattahoochee - Chipola River Basin Management Plan. The plan is expected to be available in 2007.

Goal 5. *Develop or implement 10 subwatershed protection plans (11-14 digit Hydrologic Unit Code subwatershed number) to provide reasonable assurance that load allocations for targeted sources and causes of NPS pollution are being addressed and water use classifications and standards can be restored as expeditiously as possible.* (Endpoint: 2015)

- In October 2005, a final watershed management plan designed to achieve Section 319 grant guideline elements was developed based on a TMDL for the Saugahatchee Creek Watershed. The ADEM is coordinating with watershed stakeholders for Section 319-funded best management practice funding.

- In Summer/Fall 2005, Section 319 cooperative agreements were executed to implement best management practices in Yellow Bank Creek, Goose Creek, Thacker Creek, Long Branch Creek, Crowdabout Creek, Black Creek, and Harris Creek watersheds. Subwatershed plans for these Section 303(d) listed waters will target the sources and causes identified in the TMDLs that have been developed for these impaired waters.

- ADEM continued to partner with the Black Warrior Clean Water Partnership to finalize the Dry Creek Watershed Management Plan, the Tennessee Valley Clean Water Partnership to finalize the Harris Creek Watershed Management Plan, the Tennessee Valley Authority, Tennessee Valley Clean Water Partnership, and The Nature Conservancy to finalize the Paint Rock Watershed Management Plan (to include the Section 303(d) listed, Little Paint Rock, Guess Creek, and Cole Spring Branch watersheds).

- In October 2005, ADEM began partnering with the Dale County Soil and Water Conservation District to develop a subwatershed plan for Hurricane Creek. The plan will address NPS pollutant sources and causes as listed on the Section 303(d) list of impaired waters.

- In August 2005, Section 319 was used to sponsor a statewide NPS pollutant load reduction model training course for ADEM staff and about 35 watershed stakeholders. The training was deemed critical by ADEM for subwatershed plan development since the components dealing with pollutant load reductions in the Section 319 grant guidelines appears to be the primary reason stakeholders have been apprehensive in developing subwatershed plans.

- Beginning with FY05 Section 319 cooperative agreements, timelines for implementing incremental grant watershed-based workplans will be reduced from 5-years to 3-years duration, in order to expeditiously restore impaired waters.

Goal 6. *Support the efforts of the Alabama Clean Water Partnership (ACWP) Program* (Endpoint: 2015, or until the ACWP program is institutionalized)

- ADEM continued to partner with the Alabama Clean Water Partnership by serving on the Board of Directors. ADEM's NPS Unit staff continued to be closely involved with all major river basin, sub-basin, and watershed CWP advisory, technical and education and outreach committees so that watershed stakeholders "work off the same page." Meetings are generally held quarterly.

- ADEM continued to partner with the Alabama Clean Water Partnership by providing Section 319 financial assistance for nine river basin facilitators and one statewide program coordinator.

Goal 7. *Plan, sustain, or expand statewide NPS education and outreach to target agriculture, silviculture, urban, construction, resource extraction, and hydrologic/habitat modification.* (Endpoint: 2015)

- ADEM continued to support the efforts of the Alabama Clean Water Partnership which includes a statewide education and outreach committee that develops resources that target general and specific NPS education topics. Each of the individual basin

Partnerships have also coordinated and participated in many workshops, conferences, and displays in the past year and have targeted many specific and cross-cutting NPS categories statewide.

- A project to better understand the measure of excess runoff from Concentrated Aquatic Animal Production facilities in Alabama has been implemented. Several presentations have been given as a result of this project.

- Erosion and Sediment Control Workshops targeting construction runoff have been held across the state through a project with the Soil and Water Conservation Society.

- This past year Alabama's Nonpoint Source Education for Municipal Officials (NEMO) Project introduced a second tier of training focusing on Growth Readiness.

- Introductory and advanced stream restoration workshops, stormwater workshops, and a basic watershed science workshop have been held throughout the state in Auburn, Birmingham and Montgomery. Each workshop featured classroom and field work that introduces basic concepts of fluvial geomorphology and classification systems such as the Rosgen Stream Classification System.

- Alabama Water Watch is a statewide program dedicated to developing citizen volunteer monitoring of Alabama's lakes, streams, and coasts. From October 1, 2004 through September 30, 2005, AWW conducted 92 training sessions attended by 487 people; 76% were conducted by or with a Citizen Trainer. Twenty-six Water Chemistry Workshops (292 people), 42 Recertification Sessions (148 people), 14 Bacteriological Workshops (134 people) and five Stream Biomonitoring Workshops (50 people) were conducted during the report period. Four Training-of-Trainer sessions were conducted during this period: one for Water Chemistry (14 people), one for QA Officer (21 people), one for Trainer Refresher (7 people) and one Internship for two Water Chemistry Trainers.

- The Broad-scale Communication and Forecasting for Environmental Quality project provided the development of an interactive website with watershed protection information (e.g., satellite imagery/flyovers, environmental data and information, watershed status/health, pollution prevention tips and solutions, etc.) that is used as a communications mechanism to relate the connection between the weather, the environment, and watershed protection, to the citizens of Alabama.

- ADEM provided funding for the training of district administrative coordinators (DACs) of the Natural Resource Conservation Service in conservation education. As a result of this workshop, DAC's in Lawrence, Elmore, Shelby, Lee, Dale, and Conecuh counties conducted workshops to teach elementary and high school teachers about various aspects of conservation and environmental protection.

- ADEM, in a joint effort with other agencies, continued to play a supporting role in the Alabama Envirothon competition by helping in event planning, developing test materials, leading many of the training events, judging, and overall program implementation.

- Nonpoint source pollution and its relationship to groundwater are demonstrated by several activities at the Alabama Groundwater Festivals. Twenty-Five counties hold the annual festivals, with 3 more added in 2005.

Goal 8. *Report as applicable, monitored or modeled estimates of nitrogen (lbs), phosphorus (lbs) or sediment (tons) load reductions to help quantify the effectiveness of Section 319 projects in protecting water quality and attaining applicable water quality standards.* (Endpoint: 2015)

- In August 2005, Section 319 funds were used to sponsor a statewide NPS pollutant load reduction model training course for NPS Unit staff and watershed stakeholders. The training was also attended by TMDL development staff and EPA staff.

- Pollutant Load Reductions are summarized earlier in this report.

Goal 9. *Obtain NOAA and EPA Final Approval of the Alabama Coastal Zone NPS Management Program (CZARA) (*Endpoint: 2003).

- In June 2005, ADEM and the Mobile County S&WCD partnered with the Alabama Coastal Foundation to present another technical assistance workshop, the *Coastal Alabama Wetland Plant Identification Workshop*. This 4-day field course provided hands-on instruction to identify wetlands plants for both agency regulatory staff and resource consultants.

- The Coastal NPS Management Program documents and submissions have undergone review by NOAA and EPA. Section 319 set-aside funding for coastal programs has not been expended pending assessment of their comments and the potential need to fund/

target specific actions needed for ultimate approval. However ADEM staff and EPA met recently to coordinate an approvable approach to these items and issues.

- These projects are under development for implementation of ADEM's Alabama Coastal Nonpoint Pollution Control Program (ACNPCP). These Project Study Plans and Scopes of Services have been secured to Project Contractors and were completed by September 30, 2005:

1. **Agriculture BMP Survey Project-**This project is contracted to the County Soil and Water Conservation Districts to provide for the development of an Agriculture BMP Survey and a ***Coastal Alabama Agriculture BMP Survey Report***, detailing the assessment of Agriculture BMPs (i.e. agriculture management measures) in the ACNPCP Management Area for both Baldwin and Mobile Counties.

2. **Hydromodification/Riparian Project A: Riparian Stream GIS Layer Survey-**This Project is being conducted by the Alabama Department of Environmental Management-ISB staff for the digitization of Mobile County streams layer and coordination with the Baldwin County Planning and Zoning Department to ensure that their production of the Baldwin County stream layer is compatible and correlates with the Department's product. It also provides funding for the GIS layer development and integration of attributed channel modification structures including culverts, dams, weirs, grade control structures (e.g. Riprap), and levees, as visible using the CIR photography.

3. **Hydromodification / Riparian Project B: Reference Reach and Regional Curve Studies-**This project is contracted to the U.S. Fish & Wildlife Service to develop a ***Coastal Alabama Riparian Reference Reach and Regional Curve Study*** report that will integrate the objectives of the project products to include site assessment, gauge surveys, and regional curve development, in a final report. By furthering our understanding of regional stability for coastal streams, localized guidelines can be improved or developed for designing culverts, bridges, and stream restoration projects that preserve natural bankfull channel dimensions, stream channel stability, and connectivity to their associated floodplains and wetlands habitats.

4. **Watershed Protection: Mobile County Public Works GIS Layer Project-**This project is contracted to the Mobile County-Public Works Division to adapt, develop and provide integrated Geographic Information System (GIS) data layers generated by the contractor to include all paved and unpaved public roadways and any other related infrastructure including bridges, major culverts, Right of Ways (ROWs), and intersections in Mobile County. Data layers should also include bridge sites from the National Bridge Inventory as well as a Mobile County developed GIS layer of bridges less than 20ft within Mobile County. Each shapefile will include its associated attributes table, listing all of the following, but not limited to: size, number, length, width, name(s), and 11-digit Hydrological Unit Codes (HUC).

5. **Vegetated Treatment Strips & Buffer Technical Training Workshop**-This project is contracted to the Auburn University Marine Extension and Research Center to provide for the development, production and sponsorship of a two-day ***Vegetative Treatment Systems (VTS) Workshop***, detailing a day of classroom instruction, gaining an understanding of the diversity, types and applied uses of vegetated treatment systems as NPS buffers, and in the field, observation of a variety of examples that are found in Coastal Alabama.

6. **Marinas-Targeted Water Quality Study for Coastal Alabama-**This project is being conducted by the Alabama Department of Environmental Management-Mobile Branch, Environmental Assessment Unit and Central Laboratory staff. The Marina Targeted Water Quality Study will seek to identify baseline Water Quality data in Marina Basins within the Mobile and Baldwin County area by collecting field samples during the 2004 Summer/ Fall boating season. The ACNPCP will select the six most concentrated areas of marinas/ recreational boating facilities and choose at least five marinas from each concentrated area to conduct water quality sampling.

7. **OSDS Operation and Maintenance Assessment Report-** This project is contracted to the University of South Alabama-School of Engineering to analyze all available and pertinent OSDS data-sets collected and consolidated from both the Mobile and Baldwin County Health Departments to develop and deliver a ***Coastal Alabama OSDS Operations and Maintenance Assessment*** report. The report will incorporate data pertaining to the placement, operation, and maintenance of OSDS from local certified Pumpers and Installers to ascertain systems failure rates and percentages. This project is aimed at assessing the operation and maintenance of OSDS systems within the ACNPCP Management Area, utilizing baseline and pertinent locale/location information to report on the estimated frequency of failures rates, inspections and maintenance projections.

8. **Alabama Streams and Wetlands Restoration Conference-** This project is contracted to the South Alabama Regional Planning Commission (SARPC) to provide a two day conference entitled, ***Alabama Stream and Wetland Restoration Conference.***

The ACNPCP is hosting the first Alabama Statewide Conference on Stream and Wetlands Restoration to showcase stream and wetland restoration concepts and efforts throughout the state of Alabama and the Southeastern United States. SARPC will seek to secure conference speakers that will present and discuss topics related to the field of riparian and wetlands restoration. Concepts, research, and results will be the primary focus of this two-day event, including topics such as sediments hydrology, in-stream structures, monitoring and evaluation, habitat issues, ecosystem assessments, and funding sources as well as other topics associated with restoration may be highlighted. Case studies of projects that are complete or in process will also be featured.

Goal 10. *Report annual Section 319 grants Program Administrative Efficiency Measures* (Endpoint: 2015)

- Reduced annual grant duration to expedite obligation of grant funds beginning with the FY06 Application for Federal Assistance.
- Reduced cooperative agreements (e.g., watershed management projects) from five-year to three-year duration.
- Continued to provide project status updates to GRTS.
- Developed and maintained a Section 319 project budget-tracking database for all ongoing grant award years.
- Submitted the FY05 and FY06 Application for Federal Assistance and workplans to EPA prior to due dates. Ongoing grants are administered and managed according to EPA guidelines.
- Continued to facilitate development of watershed management plans in order to obligate incremental grant funding and to implement the NPS components of TMDLs.
- Continued to make available at least 20% grant funding for the development of watershed plans and 80% for watershed project implementation.
- Continued to leverage Farm Bill funding for BMP implementation in Section 319 watershed projects.

Goal 11. *Utilize a flexible, targeted, iterative, and broad-based approach to support EPAs long-term National Vision that, "All States Are Implementing Dynamic and Effective Nonpoint Source Programs Designed to Achieve and Maintain Beneficial Uses of Water*." (Endpoint: 2015)

- Continued to provide financial and technical support to the Alabama Clean Water Partnership (ACWP). Provided financial support for ACWP river basin coordinators and a statewide CWP facilitator to assist stakeholders in watershed restoration and protection.
- Partnered with several public and private agencies to provide non-federal grant match. Although final figures are not available to date, non-federal match is expected to exceed the 40% minimum grant requirement.
- Continued to support the 5-year rotational river basin assessment approach.
- Continued to provide financial assistance and advisory support for statewide voluntary water quality monitoring and water quality reporting database management.
- Continued to partner with ADPH to protect the public health (collected and analyzed fish for consumption advisories).
- Continued to hold a statewide NPS Cooperators Conference (16th annual) and many ACWP meetings to enhance stakeholder communications.
- Promoted the voluntary NPS implementation approach, but also coordinated citizen complaints with the ADEM Field Operations Mining and Nonpoint Section in order to assure abatement of NPS water quality impairments.